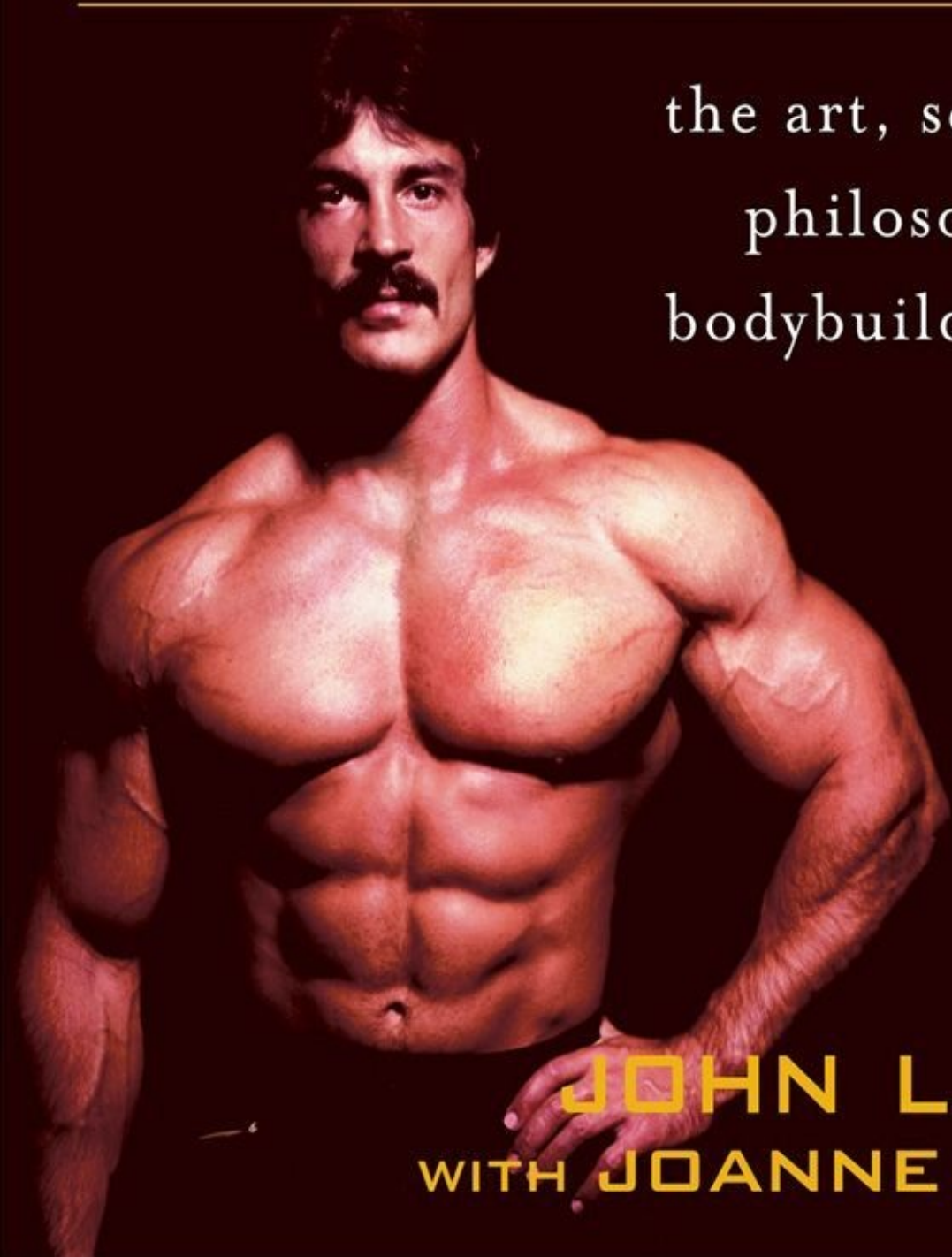


THE WISDOM OF MIKE MENTZER

the art, science, and
philosophy of a
bodybuilding legend



JOHN LITTLE
WITH JOANNE SHARKEY

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WITH JOANNE SHARKEY



New York Chicago San Francisco Lisbon London Madrid Mexico City
Milan New Delhi San Juan Seoul Singapore Sydney Toronto

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even if any of them has been advised of the possibility of such damages. This limitation of liability shall apply to any claim or cause whatsoever whether such claim or cause arises in contract, tort or otherwise.

For those who have heard of Mike Mentzer, but have heard falsely; for those who believe that character counts as much as physical beauty; for those who desire truth rather than hype; for those who seek a more rational approach to exercise and a more productive use of their time; and for those who were Mike's friends and students and wish to widen the compass of his influence and legacy. And for my children, Riley, Taylor, Brandon, and Benjamin, three of whom met Mike, but did so at too young an age to benefit from his contact. This book will reveal what their father learned from a very good friend and from an even greater human being.

And most of all, for Joanne Sharkey, a lady who has gone through so much and worked so many countless unrecompensed hours to broaden the awareness of the teachings of her late friend, Mike Mentzer, through Mike's official website (mikementzer.com). I and thousands of others are forever in your debt for all of the hours you've so diligently devoted to keep the flame of Mike's legacy burning brightly for all to see and for doing so with a dignity that Mike would be proud of.

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The authors would like to acknowledge the artistic genius of the many photographers who photographed Mike over the years and who graciously allowed us to reproduce their artistry within the pages of this book. Above all, we would like to acknowledge Chris Lund, who not only took unrivaled physique images of Mike but who also saw the merit of Mike's approach to bodybuilding and nutrition during Mike's lifetime and helped promote Mike Mentzer and his Heavy Duty™ training system throughout the United Kingdom. Additional thanks are due to Bob and Gail Gardener, *Iron-man* magazine, and John Balik, who not only took some incredible physique images of Mike Mentzer (many of which appeared in Mike's last book, *High-Intensity Training the Mike Mentzer Way*), but also has made *Ironman* magazine the "home" of Mike Mentzer via the continued publication of Mike's "Heavy Duty" column. A huge thanks is also due Weider Health and Fitness for allowing us to use the majority of the images that appear in this book. Finally, a special thank-you must also be extended to all of Mike Mentzer's many fans and students who demanded more information on the life, art, science, and philosophy of their hero. They will be the torchbearers of Mike's legacy for future generations. Keep it burning brightly.

INTRODUCTION



Mike Mentzer-his name has become synonymous with perfection in the art, science, and philosophy of bodybuilding. (Photo by John Balik, courtesy of Weider Health and Fitness.)

The name Mike Mentzer is synonymous with perfection in the art, science, and philosophy of bodybuilding. Mike was the first bodybuilder to ever garner a perfect score in the Mr. Universe competition and more important, he was one of the few innovators and pioneers in the interrelated fields of bodybuilding training and nutrition. Mike's training ideas (culled from intense personal research with thousands of bodybuilders from around the world as well as from his own vast in-the-gym experience), in addition to his highly motivational philosophical writings, have been embraced by tens of thousands of bodybuilders the world over, along with athletes, businessmen (and businesswomen), medical practitioners, fitness enthusiasts, and those who simply enjoy reading the words of an immanently rational man on the subject of bodybuilding exercise.

Despite his passing in June 2001, Mike's popularity has continued to grow. When he first arrived on the bodybuilding scene in the mid-1970s, he was received as a breath of fresh air by a public that had grown tired of hype and had become hungry for substance. Most certainly he attracted attention; possessed of that rare combination of chiseled good looks, Grecian statuesque muscle, and a professorial mind, Mike was something of an anomaly in bodybuilding. He was a man who was just as comfortable discussing the

psychoepistemology of Ayn Rand's Objectivism, the existentialism of Jean-Paul Sartre, the *Will to Power* of Friedrich Nietzsche, or the novels of Henry Miller as he was discussing the sets and reps of the pumping-iron fraternity. In addition, and unlike many of his contemporaries in the iron game, Mike was always approachable. He genuinely enjoyed speaking to inquiring bodybuilders about a better way of training and later, of a better way of thinking about training.

He was born into a modest middle-class family in Germantown, Pennsylvania. In his youth, he cultivated exceptional athletic skills, and yet it would prove to be the solitude of the gym, rather than the glory of the gridiron, that he preferred. He was a voracious reader of broad erudition, and even at a young age he was something of a seeker after truth. He learned all he could about strength training from the American weightlifting legends who filled the landscape of the York Barbell Club in York, Pennsylvania, rubbing shoulders with such luminaries as Bob Hoffman (the onetime coach of the U.S. Olympic weightlifting team); Mr. Universe and Olympic athlete John Grimek; champion weight lifters such as Bill March, Tony Garcy, and Bob Bednarski; as well as the first official champions in organized powerlifting, Terry Todd and Ernie Puckett. In time, Mike spent considerable time studying medicine and psychology, and he met and trained under the watchful eye of Nautilus exercise-equipment impresario Arthur Jones, a man from whom he learned the fundamental principles of high-intensity training that forever altered the course of his life.

While Mike went on to develop one of the greatest physiques in the history of bodybuilding, it was his mind that ultimately proved to be the vehicle responsible for lifting him into the world of superstardom, causing him to revolutionize the way bodybuilders think and train.

Mike's star might have reached its zenith in 1983, when he achieved an almost godlike status within the sport and even attracted the attention of a large segment of the general public, appearing on such popular international television programs as "The Merv Griffin Show," and competing and commentating on other internationally televised events such as ABC's "Wide World of Sports" and CBS television's Superstars competition. His photos adorned bestselling posters and magazine covers, and his handsome face was seen splashed across the pages of *GQ* magazine. Over time, his followers grew to number in the tens of thousands. Yet throughout his lifetime, few people ever got to know the real Mike Mentzer—the man behind the legend—and fewer still in number were the people he considered his friends.



Mike Mentzer, being interviewed by CBS television just after his Mr. Universe win in Acapulco, Mexico, wherein he received the first-ever perfect score in bodybuilding competition. (Courtesy of Weider Health and Fitness.)

During an interview conducted early in his bodybuilding career, Mike made the comment, “I don’t care to have many friends and acquaintances, but the few good friends I possess are very close to me.” He would hold to this credo for the remainder of his life. He didn’t have many friends, but those he did honor with the gift of his friendship were like family to him. I consider myself very fortunate to have been one of Mike’s friends, and many were the times that Mike and I would get together to talk about life, art, philosophy, and the science of bodybuilding. Indeed, this book is a direct result of these discussions between two friends over a period of two decades and of the lessons learned by its author from the wisdom of its subject.

It therefore gives me great pleasure to record for the benefit of future generations certain very important contributions made by my late friend that have never been explored in depth before. Certain points included in this book were shared directly with me in private settings (either at Mike’s apartment in Los Angeles or Marina del Rey, or at my home), while others were garnered from his voluminous writings and from select audio recordings not commonly known to those outside his inner circle.

In preparing this book, I have been invaluablely aided by the support, research, and insight of Mike’s closest friend (his successor and legal heir to his intellectual property) Joanne Sharkey. She made available to me never-before-released written, audio, and video materials, including Mike’s research into a revolutionary workout that consists of *only two sets* (one set of two exercises) and is performed just once every seven days or longer (and that resulted in one client actually “doubling” his bodyweight in two years)! Such rare and invaluable material from the Mentzer archives, when combined with my own personal history with Mike, has led to my much broader and deeper understanding of his revolutionary Heavy Duty training method, and it is hoped that the distillation of these materials and firsthand experiences into the pages of this book will do likewise for the reader. *The Wisdom of Mike Mentzer* contains several distinct yet interrelated sections that reveal Mike’s belief and indeed his passion for the integration of mind and body.

In [Part I](#), the reader will find two chapters that detail the art of bodybuilding and the philosophy of character that can be, but sadly often is not, developed through bodybuilding. [Chapter 1](#) presents Mike's conception of art, heavily influenced by the aesthetic aspect of Objectivist philosophy. Mike held that the art of posing or displaying one's physique afforded one the opportunity to present an image of "man the hero." The factors that make this a possibility include the concepts of height, uplift, nobility, grandeur, exaltation, and reverence, which Mike referred to acronymistically as *HUNGER*. Each concept is fully explored in [Chapter 1](#), featuring Mike's own words in explaining their significance.

With regard to the question of character, many in bodybuilding have adopted the attitude of winning at all costs—including sabotaging the competition. Indeed, Arnold Schwarzenegger, the legendary bodybuilding icon and present-day governor of California, has gone on record as openly embracing this attitude as part of the arsenal he employed to achieve the highest level of professional bodybuilding competition. In [Chapter 2](#), Schwarzenegger's Machiavellian approach is contrasted with Mike's Objectivist approach of rational or enlightened self-interest and is found very wanting indeed. This chapter includes personal information on how Mike viewed the process of character development and why he felt it to be among the most important issues of human existence.

In [Part II](#), the focus shifts to bodybuilding training and the scientific principles that Mike perfected and refined in the creation of his Heavy Duty training system. [Chapter 3](#) presents the fundamental principles of Mike's bodybuilding system. The following chapter, I believe, may well be the most important chapter in this book, as it explores Mike's furthest application of the Heavy Duty training system: Consolidation Training. [Chapter 4](#) presents this revolutionary workout of extraordinary brevity: two sets (total) performed just once a week. The conventional minds in bodybuilding would be furious, but then Mike never held much respect for conventional minds. The reason behind the success of this radically new approach has to do with the fact that certain individuals (either near the top of their genetic potential or those with below-average recovery ability) cannot stand any more exercise than this. Also, just as there are those who can tolerate only small amounts of ultraviolet sunlight stress before getting a sunburn, there are likewise those who can tolerate only small amounts of exercise stress before becoming overtrained. A very provocative concept, indeed!

From there, the more advanced bodybuilding trainee is invited to take another step up the ladder of intensity as I present Mike's never-before-published training methods for advanced Heavy Duty workouts. I have Joanne Sharkey to thank for making available an audiotope containing Mike's ruminations on this vitally important subject. It is, for example, well-known within bodybuilding that Mike advised all trainees to take each and every set of repetitions to a point of "positive failure," which is the point in a set where another full-range repetition is impossible. For beginners, intermediates, and even advanced trainees, this protocol works exceedingly well. However, as a bodybuilder's body adapts to that level of training intensity, it becomes increasingly more difficult to stimulate additional muscle growth. The solution, as Mike points out, is to expose your body to not "more" exercise, but rather "harder" exercise. Unique and powerful new protocols exclusive to Mike Mentzer and Heavy Duty are called for at this point, and they are revealed in [Chapter 5](#) for the first time—techniques such as Omni-Contraction and

Infitonic training.

[Part III](#) details certain historical events from Mike's personal history that had direct bearing on either the development of his physique or the further development of his Heavy Duty training approach. [Chapter 6](#) presents what Mike once shared with me as being his "most productive" bodybuilding routine—the one that he held put the most muscle on his physique when he was preparing for competition. [Chapter 7](#) reveals Mike's tips and secrets to building bigger, more muscular arms. Of all his bodyparts, Mike's arms were absolutely phenomenal to witness in the flesh (and there was *a lot* of flesh to witness!). As most aspiring bodybuilders are struggling to break the barrier of the 14½-inch arm, the information in this chapter will be of enormous help and perhaps just what they need to break through their plateau to greater arm mass. [Chapter 8](#) reveals how in the early 1990s, Mike trained future multi-Mr. Olympia winner Dorian Yates in workouts that are now legendary within the bodybuilding community. I was present for two of these sessions and spoke to Mike about these revolutionary workout sessions. This chapter describes in detail the training workout Mike put Dorian through that changed the landscape of bodybuilding: only one set of several exercises that, once word got out, started a revolution in how hard-core bodybuilders trained.

Finally, no matter how clearly Mike wrote about the requirements of productive bodybuilding exercise, bodybuilders continue to have questions about the finer points of his Heavy Duty training system. For this reason, [Chapter 9](#) is devoted to answering the most prevalent of these questions.

I had mentioned earlier that Mike's legacy has continued to grow over the years—and for reasons perhaps more important than his bodybuilding laurels. A large number of fans are inspired by the manner in which he openly opposed the huge commercial interests that pull the strings behind the scenes in professional bodybuilding. Mike is remembered as a man who stood alone against the giants of this industry and suffered their blows, giving as good as he got. In an industry that preys largely on naïve young bodybuilders' gullibility and operates from a follow-the-herd mentality, Mike Mentzer stands alone as a champion of truth and objective fact and, perhaps, as the lone voice of reason.

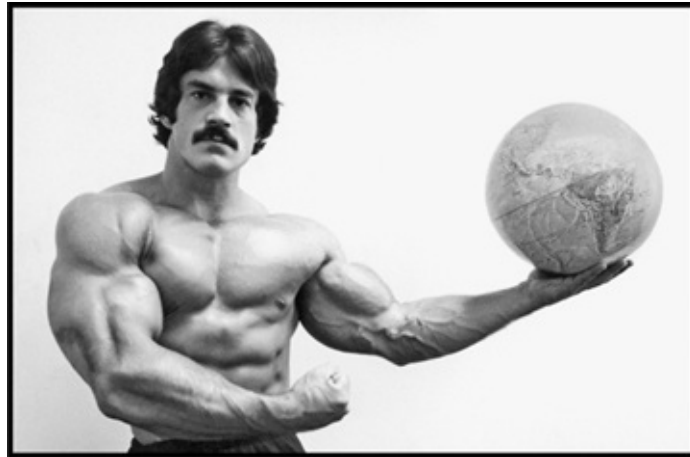
This reason above all others is why Mike's memory deserves to be honored, and it is the motive behind the writing and publication of this book.



Mike Mentzer: Creator of the Heavy Duty approach to bodybuilding, philosopher, and master of the art of expressing the human body. (Courtesy of Weider Health and Fitness.)

Part I

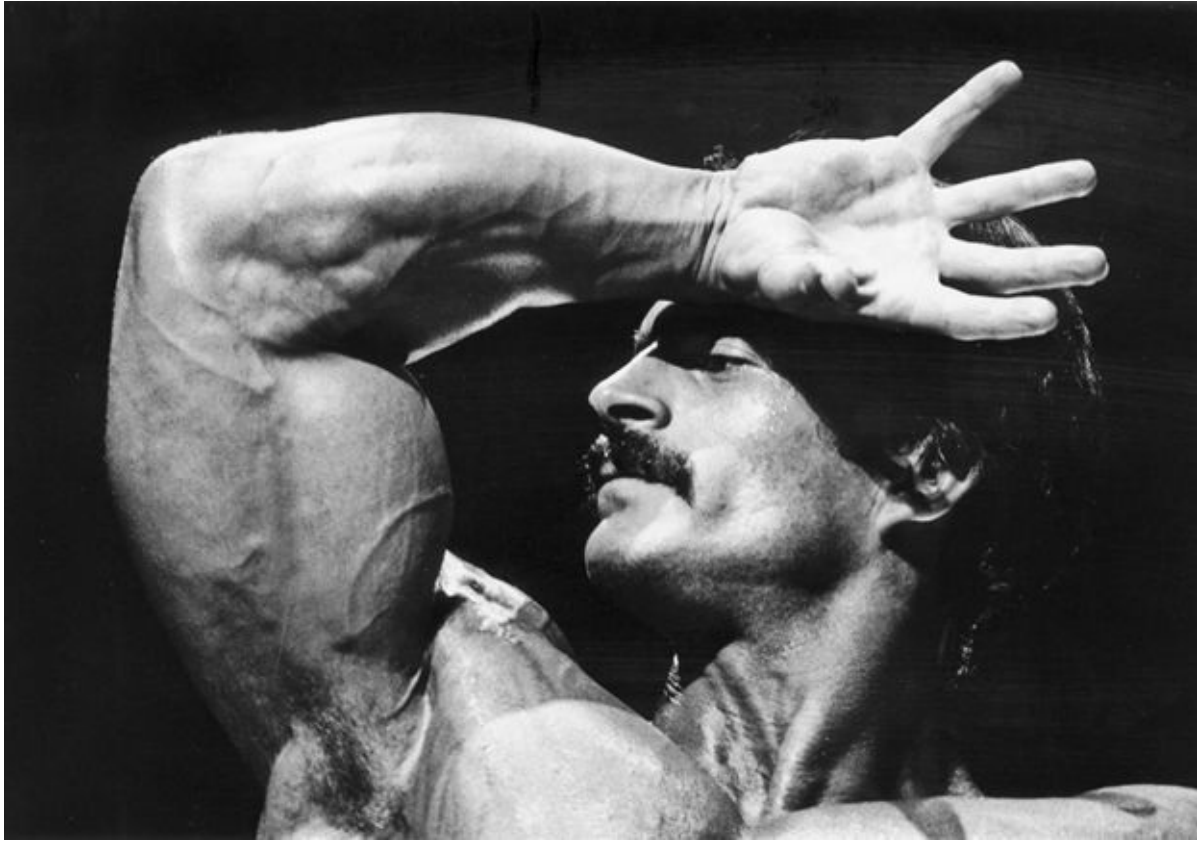
ART AND PHILOSOPHY



(Courtesy of Weider Health and Fitness.)

Chapter 1

HUNGER: THE NOBLE ETHOS OF BODYBUILDING



Mike Mentzer always chose dramatic poses for his routines, resulting in his projecting a message to his audience about the significance of being alive and being human. (Courtesy of Weider Health and Fitness.)

There are two fundamental ways of viewing man: Man the exalted hero, who stands noble and tall, proud of his ability and willingness to be a creative, productive innovator, or there was man the evil villain, who relied on the use of physical force to get what he wants. Cindy and I had always been passionate hero-worshippers, so our goal was to find music and poses that would convey to the audience the emotional connotations related to height, uplift, nobility, grandeur, exaltation, and reverence. I would make the effort to use these abstractions that came from religion and pertained to the supernatural, and redirect their emotional counterparts to their proper place here on earth—to Man the Hero.

—Mike Mentzer, from his last writing and his only work of fiction, “The Integrated Man”

**(Revised *Heavy Duty Journal*,
Mentzer-Sharkey Enterprises, Inc. © 2005)**

The lights in the Sydney Opera House had gone down, and those who had been in attendance during the morning’s prejudging were now at the edge of their chairs in anticipation of the next competitor, Mike Mentzer. It was the evening finals, and according to firsthand accounts by those who reported on this contest in later years, Mentzer was considered the one to watch—the one with the best physique on stage that day. The crowd,

sensing something powerful was about to envelop them, waited in anxious silence.



Mike typically chose classical music to pose to, which made his posing routine that much more stirring and dramatic. (Courtesy of Weider Health and Fitness.)

From out of the darkness, music was heard, a stirring and soulful string section: “Siegfried’s Funeral March” by the renowned and controversial classical composer Richard Wagner. A lone spotlight hit the center of the stage and into the ring of illumination appeared Mentzer. A collective gasp issued from those attending; he had not even hit his first pose and already the Mentzer physique was magnificent. The abs were deeply etched, as were the thighs; the pecs were squared and full; the biceps were deeply chiseled from the triceps; and the shoulders were so wide they almost defied optics. As he stood for a moment surveying the very souls of those who would sit in judgment of his physique that day, a smile played about his lips.

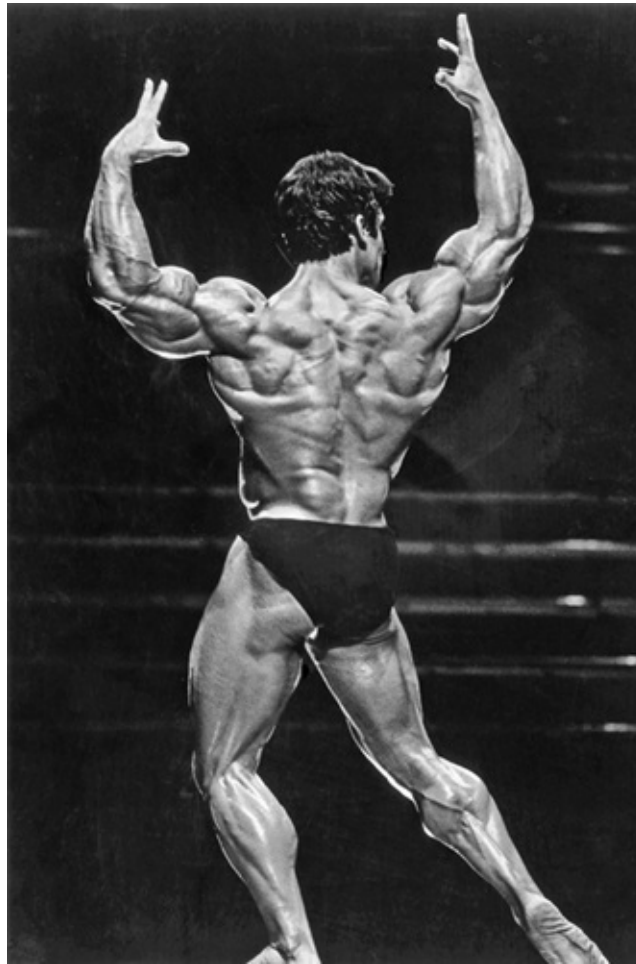
The music stirred again, and Mentzer’s arms moved upward. A pause. The music played a second refrain, and his arms moved higher. The audience was still seated in stunned appreciation when the music played again, and Mentzer raised his arms fully out to the side, flexing his biceps, triceps, and forearms and causing his phenomenal lats to flare out like a manta ray as they tapered into a wasplike waist. Mentzer then contracted his biceps, which now jutted up in bold relief as if suddenly chiseled in by the hand of an invisible sculptor. The crowd roared their approval as Mentzer slowly turned to reveal his back. In perfect syncopation, the music changed to Aaron Copland’s *Fanfare for the Common Man*, and Mentzer raised his arms again, this time allowing the audience to see his shoulder muscles snap to attention. What appeared to be small explosions of activity in the deltoid muscles gave way to wave upon wave of intricate muscular detail that coursed through the width and breadth of his back: traps, rhomboids, teres, and erectors—all undulating and rippling like waves across the surface of a pond. These were images that Mentzer could freeze at any time, posing several different muscle groups at once until his back looked like a bronze relief map. The crowd at this point could not believe that a human being could look so, well, godlike. It was as if they were witnessing a magnificent statue come to life before their eyes, only more inspirational. More inspirational because this wasn’t some artist’s painstaking endeavor with clay to present a vision of how a human being *could* look; this was how good a genuine human being *does* look. The individual they were now beholding was *genuine*—created by man and of man with flesh and blood as the raw materials.

What Mentzer revealed on the dais that day was something far more than simply a Mr. Olympia-caliber physique; it was a living, breathing symbol of man’s ability to achieve perfection of form through the application of his reasoning mind. His highly chiseled body was a personification of the triumph of the human will over the forces of nature and over months and years of pain, denial, and the supreme effort required to build a body that

looked like living, moving art. This moment, this presentation, framed completely the potentially noble ethos of bodybuilding. It not only put on display what is possible for one man to achieve when he put his mind to it, but what is possible for any man (or woman) to achieve when he chooses to forge his body in the fire of his will.

Many bodybuilders consider bodybuilding an art form and themselves to be artists, but they also seem locked into the notion that the art of bodybuilding deals simply with issues of symmetry, mass, and definition. Art ends, in other words, a few steps outside of the gymnasium door. Art, however, runs deeper than the raw materials out of which it is fashioned. Muscle is not art; it is the raw material of art, much like the Carrara marble that went into the creation of Michelangelo's *David*, which did not become art until he infused it with purpose. How raw material is fashioned, shaped, and presented to the public, and what that material comes to stand for are what determine its aesthetic or artistic value. For example, historian and philosopher Will Durant, writing of Michelangelo's *David*, indicated that its message was

a radical *pronunciamento*, symbol of the proud restored Republic, stern threat to usurpers ... the splendid frame, not yet swollen with the muscles of Michelangelo's later heroes, the finished texture of the flesh, the strong yet refined features, the nostrils tense with excitement, the frown of anger and the look of resolution subtly tinged with diffidence as the youth faces the fearsome Goliath and prepares to fill and cast his sling—these share in making the *David*, with one exception—which should be the *Hermes* of Praxiteles but more probably is the *Statue of Liberty* in the harbor of New York—the most famous statue in the world.



Mike Mentzer's back development was nothing short of phenomenal. In this photo, taken at the 1980 Mr. Olympia contest held in Sydney, Australia, he was at his absolute peak of condition. (Photo by John Balik, courtesy of Weider Health and Fitness.)



Mike Mentzer understood that art can and should be deeper and more enduring than what is dreamed of by most bodybuilders—that it can be a symbolic representation of man's ideals. (Courtesy of Weider Health and Fitness.)

That is to say, art can and should be deeper and more enduring than what is dreamed of by most bodybuilders. Few know, for example, that art can be a symbolic representation of man's ideals; a concretization of abstract propositions; a mirror that reflects back upon individuals the images of their beliefs, dreams, and possibilities; and a spiritual refueling station on the path toward future achievement.

Mike Mentzer, to my knowledge, was the first professional bodybuilder to take aesthetics or the philosophy of art seriously. Each pose of his routine was carefully selected with a definite purpose in mind: not only to best display a particular muscle group but also to convey a positive and inspirational message to all who were watching. In contrast, many bodybuilders view posing more as entertainment than art. That is, they put their greatest effort into the "sport," or competition, component of a contest (i.e., the prejudging). Then, with the "money rounds" behind them, they merely cobble something together—usually based on the traditional and homogenous mandatory poses of the prejudging rounds—and typically throw in some sexually suggestive gestures in an effort simply to get a rise out of the crowd attending the finals. Rather than communicate something to the audience (the purpose of art), they want the audience to communicate something to them (love, affection, enthusiasm, encouragement)—or better yet, to communicate something to the judges so these bodybuilders might pick up a point or two and place somewhat higher. But art in bodybuilding is neither an appeal for group approval nor a quick fix for a fragile ego, and it is not a means by which to intimidate a

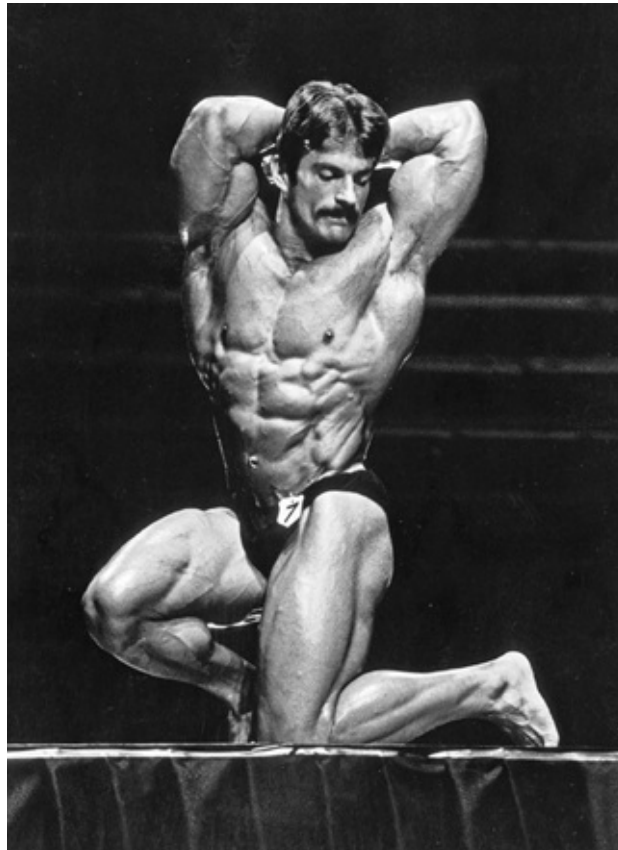
judging panel. It requires, in Mike Mentzer's words,

... that you express your own individuality, which involves a certain amount of creativity and reflects the artistry of bodybuilding. As a so-called sport and art style, posing in bodybuilding demands the mastery of technical skills along with artistic renditions. To the degree that posing expresses how an individual feels about himself and his relationship to the audience, posing is a form of nonverbal communication. Hence, it's necessary to make each pose technically perfect, and this involves the proper placement of the hands, feet, and head. ... The point is, the style of posing you adopt should serve as a complete expression of who you are.

Shortly before his death, Mike penned what I believe is his finest piece of writing (which is saying something). It was his first attempt at fiction writing, which used bodybuilding as its theme and the principles of Objectivism (the philosophy he loved) as its base. It is also the most eloquent presentation of how he viewed the aesthetic of posing in bodybuilding.

The outline takes the form of a narrative tale or short story, but the values he advances are rich, human, and very inspirational. Mike writes in the first person under the alias of his protagonist, Mark Whitcraft. This protagonist is a champion of romantic love and romanticism (the romantic school of art), so it is only fitting that his love interest in the story should—like a true Objectivist—share a commonality of values with her beloved. These values are the attainment of goals, the struggle to realize ideals, and bodybuilding as representing the highest rung on the philosophical ladder because it integrates man's highest ideals both intellectually and physically, in the abstract and in the concrete. Strength, power, success, achievement, happiness, and efficacy all shine forth through the symbol of the well-developed body communicating the ethos of the Objectivist aesthetics. Here for the first time is an excerpt from Mike's last work that speaks to the art component of bodybuilding:

"The purpose of art," she loved to repeat from time to time, for her own inspiration, "was to set man's soul on fire and never let it go out." "Art," she would recite verbatim—as it was so clearly, eloquently and objectively explained in her favorite book on the subject —"is the concretization of metaphysics (an individual's abstract estimate of man and of existence). Moreover," she went on, "art is the indispensable medium for the communication of a moral ideal." This last point, she taught me, explained the historical connection between art and religious morality. Men couldn't be expected to read exhaustive philosophical treatises explaining all the virtues one was expected to practice; this would represent too lengthy a chain of abstractions; too much for anyone's rational faculty to hold in focus. The function of art was to concretize these abstractions in the personification of a human moral ideal. In other words, rather than have to refer to an undue, lengthy passage to know how to act in certain situations, summoning the image of the human ideal would serve to provide the individual automatically with the knowledge of how one should act. Two perfect examples of personified moral ideals, each representing opposing philosophies, are John Galt and Jesus Christ.



“The purpose of art was to set man’s soul on fire and never let it go out.” Mike Mentzer does that with this unique kneeling pose, revealing tremendous definition of the abdominal, intercostal, and serratus muscles. (Photo by John Balik, courtesy of Weider Health and Fitness.)

There are two fundamental ways of viewing man: Man the exalted hero, who stands noble and tall, proud of his ability and willingness to be a creative, productive innovator, or there was man the evil villain, who relied on the use of physical force to get what he wants. Cindy and I had always been passionate hero-worshippers, so our goal was to find music and poses that would convey to the audience the emotional connotations related to height, uplift, nobility, grandeur, exaltation, and reverence. I would make the effort to use these abstractions that came from religion and pertained to the supernatural, and redirect their emotional counterparts to their proper place here on earth—to Man the Hero.

Perhaps our favorite shared form of art was music. Music is the only form of art that bypasses the human critical/conceptual faculty entirely, directly affecting the emotions; hence its enormous appeal and power in all cultures. It was for this reason that I had to be careful about which music I chose and why I had to choose my poses carefully as well. The music and the posing had to be integrated, that is, consistent and noncontradictory, since both would express my art—my view of man through my sense of life emotions, as displayed in my movements on stage and through the music I chose.

I recall that after Mike had sent me this piece to read, he called me up for my feedback. After I communicated how impressed I was by the piece, he couldn’t contain himself.

“Did you like the part on how the character chose his poses?” he asked somewhat excitedly.

“Umm, yes,” I mentioned, recalling the passage.

“The words he selected—the emotional connotations—of each pose?”

“Yes,” I again replied.

“I want you to write down each of those words, one beneath the other.”

I wasn’t sure where this was going, but I knew Mike well enough to know it was leading to something.

“Did you find the passage?” he asked.

“Yes, here it is,” I replied, thumbing through my printout to the appropriate paragraph.

“OK, what’s the first word?” Mike asked.

“*Height.*”

“Good. Now write it down.”

I did.

“What’s the next word?”

“*Uplift.*”

“Keep going.”

“*Nobility.*”

“OK.”

“*Grandeur.*”

“Yep.”

“*Exaltation.*”

“Um-hmm. That’s a particularly good word,” Mike intoned.

“*Reverence.*”

“Do you have all the words written down?”

“Yes.”

“Good. Now underline the first letter in each of those words, and join those first letters together into one word—what have you got?”

“H-U-N-G-E-R.” I replied, rather surprised at the acronym that had manifested.

“Right!” Mike boomed,

And HUNGER is exactly what you require to succeed in bodybuilding; you must be hungry for it—you must want to build your body so badly that you are willing to endure the highest of high-intensity training, the kind of training necessary to achieve the desired result of bigger muscles. And of course, HUNGER is also what you must have for knowledge, for philosophy, in order to determine the means—reason—to achieve your goals. In short, you must HUNGER to realize your full human stature of developing your mind and body to become a

completely integrated being.

Of course, now I can never read that sentence of Mike's without hearing his voice telling me of lessons that even his works of fiction contained. But that is art, whether in literature or on a posing dais: to communicate or express something. The only choice is in what you choose to communicate. Bodybuilding as Mike Mentzer envisioned it—and as he practiced it—was a very noble endeavor. It was a physical creation born of human will and creativity that revealed human possibilities—increased strength, health, appearance, and personal efficacy—to others and thus served to champion the human spirit in a manner that would incite others to develop their full human stature.

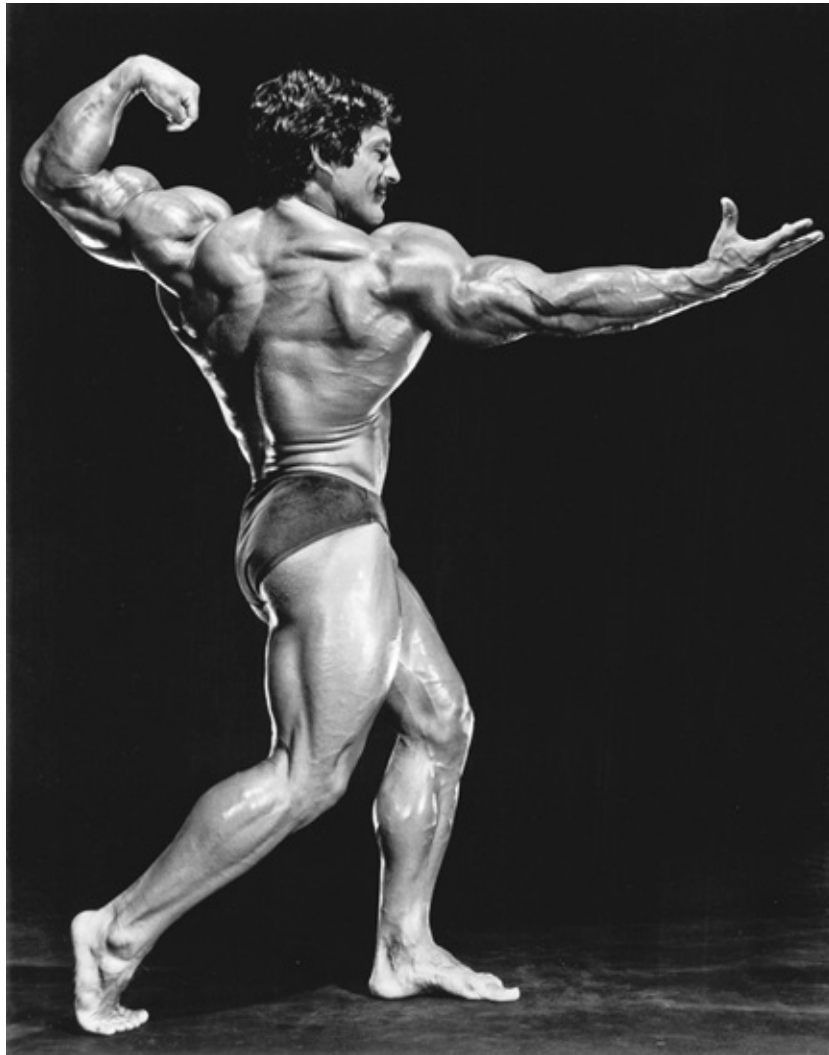
Again, this was Mike's view of the ethos of bodybuilding. Others, perhaps, don't have the lofty conception of bodybuilding that Mike had and view it merely as a stepping stone to another career or as a means to an end. However, there is a growing movement of support for the positive, noble, and life-enhancing values that Mike loved so much and loved to express through his arts of writing and posing (both of which deal with self-expression). If these ideals speak to your sense of life as they do to mine—your innermost feeling of what bodybuilding can and should be about—you might want to consider the following suggestions that are based upon Mike's aesthetics.

HEIGHT

While on stage (and in life for that matter) comport yourself above the base or animal level. Man's highest faculty is the creative faculty, so don't simply slap together a posing routine that communicates anything but your true self. Don't copy prejudging poses or someone else's poses—be creative! Let your movement make a statement about what you represent, your beliefs and your values. Your poses can express the basest of animal impulses or the loftiest capabilities of the human species, so take the higher path.



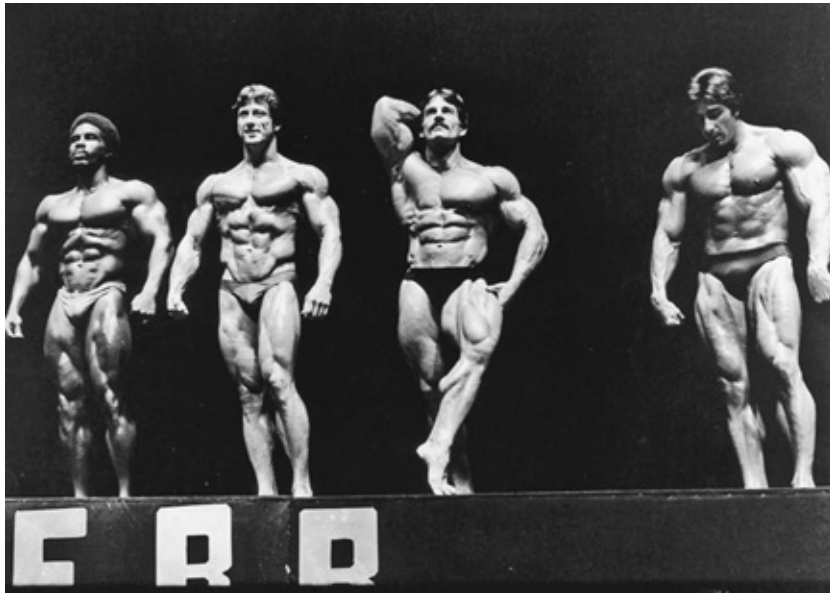
Always the individual: Mike Mentzer displaying a pose that he created and that has become his signature. (Courtesy of Weider Health and Fitness.)



Mike Mentzer hitting a unique three-quarter back pose in a manner that is both meaningful and purposeful. (Courtesy of Weider Health and Fitness.)

UPLIFT

Closely related to height is uplift, as both communicate your metaphysical value judgments and reflect your soul. Ed Corney, as many may recall, was an absolute master of posing, a man who truly lifted it into the realm of art. One could understand what he was feeling, thinking, and believing simply by watching him pose. Other bodybuilders tend to hit poses that display a muscle group or a “look at me” mentality, with the result that the image of their poses does not linger in a viewer’s consciousness but quickly evaporates.



Mike Mentzer believed that each and every competitor in a contest has created a work of living art for your consideration and is therefore worthy of your respect-either as a spectator or a fellow competitor. They are not “enemies” to be defeated; they are fellow bodybuilders who have worked like you to improve themselves. Here Mike (center stage) shares the posing dais with bodybuilding legends (from left to right) Robby Robinson, Frank Zane, and Dennis Tinnerino at the 1979 Mr. Olympia contest. (Photo by Chris Lund, courtesy of Weider Health and Fitness.)

The difference between posing artists such as Corney and Mentzer and the vast majority of bodybuilders is that the former choose to use posing to communicate something meaningful and purposeful. It’s the element of volition or choice, and that is something entirely within your control. Are your poses creative and powerful? Are they inspiring or meaningful? Or are they senseless pleas for attention? Your music works in concert with your posing to deliver a message, and it is up to you alone to determine what the content of that message is. Take another look at yourself and your values; then through your nonverbal communication, express yourself and what you believe. Yes, it can take time in most instances, but it is doable and well worth the effort required. Mike once explained to me,

Since posing is a form of nonverbal communication, you must learn to “talk” to the audience with your body. Your onstage body language will affect the judges and the audience on both the conscious and the unconscious levels. The fact is, the very moment you appear onstage you begin conveying impressions to everyone. By being keenly aware of this phenomenon, you can purposely control what you communicate.

Uplift the spirits of your audience with your presentation to motivate them to be the best that they can be.

NOBILITY

Bodybuilding is one activity that is predicated on the highest faculty of man: his creative

capacity. A good bodybuilder must have creative foresight to know what type of training to engage in to accomplish a particular type of training effect (muscle gain, fat loss, bringing up lagging bodyparts, etc.), whereas a great bodybuilder not only has the creative foresight but also acts on and realizes it. Realizing this goal requires the mind and body to work in concert at the highest level—that is, creatively. The mind commands and the body obeys, and together ideals are realized and art is created. The physiques displayed on the posing dais—particularly at contests such as the Mr. Olympia, the Arnold Classic, and the Ironman Invitational—are the very best our species can produce. The truth is that those who make it to this level are the thoroughbreds of our species and what they have done with their bodies is art at the highest level: their muscles are the colors and their poses are the canvas. As such, there is a nobility in the witnessing of such living art. Each and every competitor in a contest has created a work of art for your consideration and is therefore worthy of your respect—either as a spectator or a fellow competitor. They are not “enemies”; they are fellow bodybuilders who have worked like you to improve themselves.



“To be effective, a posing routine must complement [your] physical attributes and at the same time express the essence of the personality.” Mike Mentzer does just that at the 1978 Mr. Universe contest, which he won with the only perfect score in the history of the contest. (Photo by Caruso, courtesy of Weider Health and Fitness.)

As such, don’t demean or try to upstage competitors on the stage. Respect them, and they will respect you. If after a competition you didn’t place as high as you had hoped, consider it a valuable learning experience and a spur to future improvement. Also, be thankful to the judges for revealing to you an area of your masterpiece that you might

have overlooked and that you can now work on to become even better. Life is a journey, not a destination, and if you hit the mark the first time out of the gate, the show's over—where else can you go when you've already hit the top? Don't criticize others—unless they are obviously malicious and have sought to harm you or your career. As the old maxim states, if you can't say something good, don't say anything. Nothing is often a good thing to do and always a clever thing to say. Your performance both onstage and off is again a reflection of your character and nobody else's. Are you proud and noble, or a whiner and a malcontent? The choice, as in all matters, is yours alone to make.

GRANDEUR

The human body is a magnificent work of art. If you believe in God, take pride in the Master Designer's ultimate design and show those muscles proudly. If you are not theistically inclined, take pride in what you have been able to achieve as a rational, thinking, planning, and achieving human being in improving on what nature has given you. Your body is a masterpiece—display it as such! Don't hide away in little shy poses. Choose poses that perfectly complement your muscular development, and let your muscles and your facial expression communicate to the audience that you are enjoying the glory of the muscles that you (or your God) have created and displayed. Again, hear from Mike Mentzer on this important aspect of posing:



“Win or lose, you are a winner for having realized a personal ambition and overcome all the obstacles you did to get here!”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

In addition to individual personality and temperament, each of us also possesses a unique assemblage of physical attributes. To be effective, a posing routine must

complement those physical attributes and at the same time express the essence of the personality ... and the selection of appropriate poses is the first step in this process. In selecting your poses, you must start out by assessing your physical stature. A person with a short, stocky physique similar to that of a diminutive Hercules would be foolhardy to attempt the ethereal moves more suitable to a lithe type of physique.

EXALTATION

Exalt your achievement with each pose! After all, this is what you have been building toward for months, perhaps even for years. You've accomplished your dream of appearing on stage in this contest—you should be damned proud of yourself for having had the will, perseverance, know-how, proper training and nutrition approach, and skill to make it to this level. After all this, are you going to pose like you're angry or melancholy? Hell no! You're going to pose like the champion you have become, and win or lose, you are a winner for having realized a personal ambition and overcome all the obstacles you did to get here.

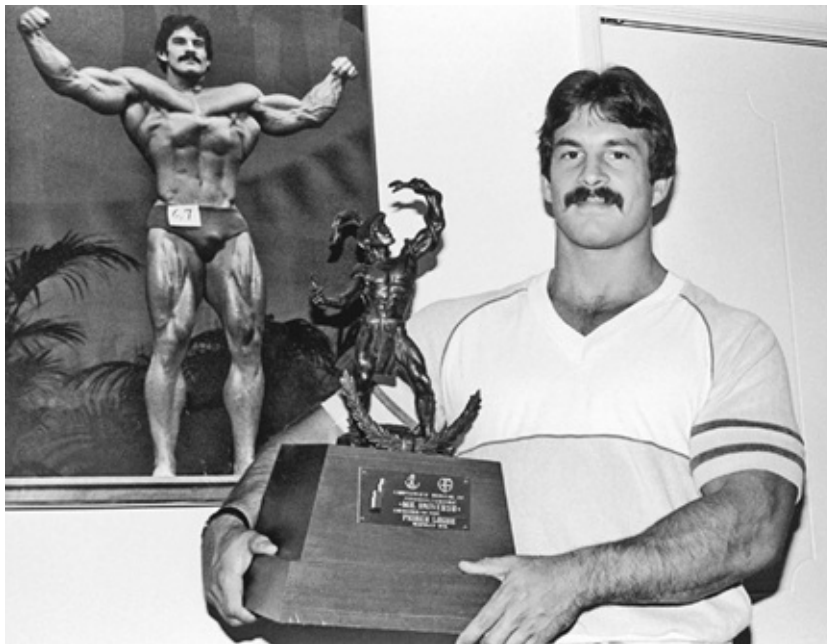
REVERENCE

Do you revere the human species' ability to achieve its objectives, from sending men to the moon and bringing them back safely, to acts of heroism in the face of danger, to the minds that determine how to achieve humanity's goals more efficiently such as building a muscular physique or unlocking the mysteries of the atom? If so, let your actions reflect that. You are a member of this species, and as such, the best of human history is but the brick and mortar of your existence, your heritage. Let your reverence and your pride shine forth. Don't engage in poses that show you as anything less than powerful, capable, and purposeful. You treat your body with respect by providing it with proper nutrition and appropriate exercise, so treat your presentation—and your audience—the same way. As Mike Mentzer pointed out,



Don't engage in poses that show you as anything less than powerful, capable, and purposeful. (Courtesy of Weider Health and Fitness.)

In addition to displaying your physical assets, it's important to exhibit a confident stage presence. Any expression of nervousness, uncertainty, or self-consciousness will cause you to appear weak and will affect the judges' decision. The audience, too, is very sensitive and will pick up on any negative emotions. If you are in your best possible condition and have done your posing homework, you should appear proud, confident, and happy. These feelings will be expressed naturally in your posing, all of which can be effectively topped off with a heartfelt smile as you make your exit.



“Don't vanish into the vast swamp of mediocrity by believing maturity is gained by abandoning one's ideals, values, and goals, and ultimately, losing self-esteem. Hold onto that noble vision, don't betray that fire; give it shape, reality, and purpose.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

So, dear reader, now that you have a better understanding of the nature and potential of art and how it applies to your presentation on stage, what is your body going to be a symbol of? What message are you going to communicate through it? Even without conscious thought, you will be communicating something even if it's merely that you are confused or scared. But you have the power to choose that which you are, that which you become, and that which you communicate. You can choose to communicate the positive or the negative, the good or the bad, the noble or the debased. It largely depends upon how you perceive yourself, the human species, and its place in the world or, as Mike would say, your “metaphysical value judgments.”

If you think of yourself as a victim, whether of society, chance, or an ineffective intellect, then your poses and music will be rather flat and listless. However, if you see yourself as a capable and competent being (both mentally and physically), then you will select both poses and music that emphasize the heroic, the best in humankind—just as Mike Mentzer did. Don't let yourself become discouraged by naysayers and skeptics. As

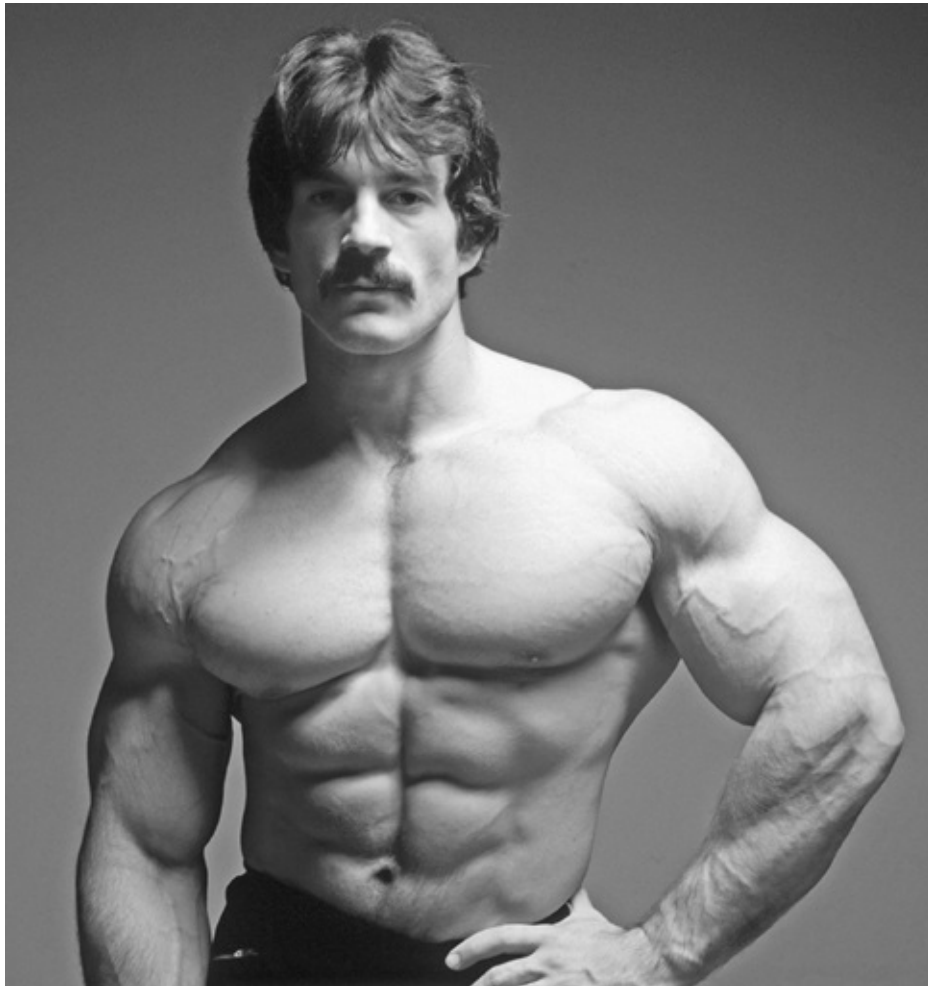
Mike pointed out,

Don't vanish into the vast swamp of mediocrity by believing maturity is gained by abandoning one's ideals, values, and goals and ultimately, losing self-esteem. Hold on to that noble vision, don't betray that fire; give it shape, reality, and purpose. Don't just be a bodybuilder, let your muscles serve as an expression of your victorious will and your glorious reason. Be the greatest damned bodybuilder YOU can possibly be!

Chapter 2

A QUESTION OF CHARACTER

THE OBJECTIVIST VERSUS THE MACHIAVELLIAN



Mike Mentzer held character building to be even more important than muscle building. (Courtesy of Weider Health and Fitness.)

Anything which I am—or am not—is through the direct result of my own choice or abdication thereof.

–Mike Mentzer

A popular adage used in military parlance has found its way into the common palaver: “Never give your enemy the knife he needs to cut your throat.” The implication is obvious; you don’t give help, whether in the form of information, assistance, or support of any means, to someone who could rise up to a position of power sufficient to challenge your status, your market (or markets, given the current international business climate), or your position. In other words, one never assists one’s competition.

Given that bodybuilding is a microcosm of the population at large, it is not surprising that this dictum should have found its adherents within the bodybuilding subculture. Arnold Schwarzenegger, for example, made no secret about his embrace of this creed. In the movie *Pumping Iron*, when his good friend Franco Columbu came to him for advice

on some point of bodybuilding, he stated, “Franco is like a little child who comes to me for advices [sic], so it’s not that hard for me to give him the *wrong* advices [sic].”

Earlier in that same movie, Arnold related to the amusement of a journalist how he had deliberately sabotaged a young bodybuilder’s first attempt at competition by instructing him to do something that would result in his being disqualified and pulled from the stage in humiliation (i.e., to growl and scream at varying pitches as he posed). I would like you to consider the bigger picture of what transpired here for a moment: a young competitor, who looked upon Arnold (as indeed most of us did in the mid- to late 1970s) as being almost godlike in terms of his physique, success, and indeed, the aura he created, came to him for advice. It appears that Arnold, rather than helping this individual or even politely declining to offer him advice, deliberately chose to sabotage this bodybuilder’s chances of winning or even placing in the contest—by betraying the young man’s confidence (i.e., deliberately misleading him under the guise of appearing to be his benefactor) and negating whatever serious efforts the bodybuilder had put into preparing for his first contest. In all likelihood, this individual never competed in bodybuilding again. As this bodybuilder was an amateur, and thus not a threat to Arnold in terms of being a competitor at the Mr. Olympia-level of development, one might well wonder why Arnold would feel the need to act in such an apparently malicious manner. What benefit would Arnold derive from subjecting this young man (and his psyche) to such public humiliation?

Then near the same film’s finale, Arnold is recorded on film attempting to disrupt Lou Ferrigno’s precontest preparations for the 1975 Mr. Olympia contest in South Africa. Presumably, Arnold’s attempts to distract Lou backstage were an effort to unhinge Lou psychologically, causing Lou to question his self-confidence, break his focus, and thereby render him incapable of being at his best and diminish his chances of winning the title. (This was a rather odd presumption in retrospect, given that the contest was judged on stage, not backstage, and that it was largely adjudicated on a series of compulsory poses that Lou hit with no problem whatsoever.) As Arnold would go on to win the contest, such tactics came to be viewed by many bodybuilders who saw the film as substantive proof of the efficacy of this abrasive win-at-all-costs attitude. Although Arnold has recently (2003) come forth and indicated that a lot of what he had claimed in the movie *Pumping Iron* was fabricated for dramatic effect, the fact remains that if true, he was willing to allow the lie to stand as fact for well over a quarter of a century (or until he decided to run for office in California).

Moreover, if the film bears false witness to Arnold’s character trait in those instances, there is additional evidence of this same attitude to be found on pages 663 and 664 of his book *Encyclopedia of Modern Bodybuilding* (1987), wherein Arnold relates with a fair degree of satisfaction how he undermined the efforts of two fellow bodybuilding competitors, Serge Nubret and Frank Zane. He fouled up Nubret’s confidence by “repeating” that one of the judges thought Nubret looked too small to be competing in the heavyweight division, which, of course, made Nubret, in Arnold’s words,

obsessed with this idea, [he] kept asking me how he looked, and his posing was thrown way off because he was reluctant to do certain shots that he felt he was too light to bring off. In close contests like those between Serge and me,

psychological factors can be decisive.

Arnold goes on to relate how, during the 1980 Mr. Olympia contest in Sydney, Australia, he told fellow Mr. Olympia winner Frank Zane a joke onstage during the prejudging that resulted in Zane laughing too hard to hit his poses successfully, thus giving Arnold a competitive edge.

The gentle art of psychological warfare: At the 1980 Olympia at one point I leaned over and told Frank Zane a joke ... and, sure enough, he was laughing so hard that his concentration for his next pose was gone.

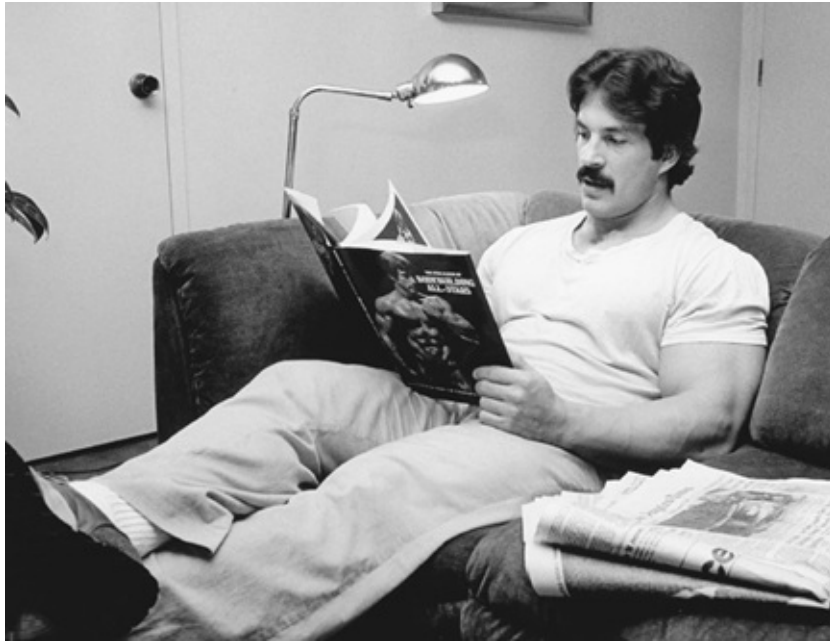
I will refrain from saying what the odds might be that seasoned professionals such as Frank Zane and Serge Nubret would be subject to such ploys. But let's take Arnold at his word: he set out to sabotage the chances of two of his fellow competitors in these contests and succeeded—a very lofty goal, indeed.

When I was younger, I, just as many other bodybuilding neophytes, laughed along with Arnold at his belittling of his fellow competitors. By his detection and exploitation of an opponent's potential weakness, Arnold looked like a brilliant tactician. By making his competitors look stupid, he in contrast appeared to be quite clever. But I've since learned that making yourself look good against people whom you have handicapped really isn't much of an accomplishment. Such anecdotes and tactics no longer serve as inspiring to me or even as humorous. In the twenty-plus years I've been involved in the bodybuilding game, I've met many people who shared Arnold's character trait on the matter of winning not by virtue but by suppressing the standard of competition, a viewpoint I find sad if not contemptible.

Over the years I've learned a little more about the ways of the world and of man and even on occasion had opportunity to speak with most of the principals of *Pumping Iron*. Moreover, I've shed a great deal of the naïveté that I possessed when I was a youth watching that film for the first time. I am now quite firmly of the opinion that with exception granted to the military, this credo of "Never give your enemy the knife to cut your throat" is the motto of timid souls who, insecure within themselves, fear that what they have—or perceive to have—hangs by so precarious a thread that it could be lost at any moment. The result is that they feel compelled to employ whatever means are at their disposal to prevent others from gaining positive exposure or success, rather than channeling their energies into trying to improve themselves. The focus of such people is always externally motivated. That is, they focus on how they are perceived, rather than on how they can improve, and this reveals a profound lack of self-esteem and an overriding fear of life itself. For if anyone can be a threat, if anyone can take what you have, then you never really had a firm grip on it (and thus the right to it) in the first place.

The goal of a rational bodybuilder should be to fully actualize his potential as a human being—not simply his physical (i.e., muscular) potential, but his intellectual and spiritual development as well. After all, the "body" as such, includes not merely the muscles, but also the brain and sense of self that attends using both efficaciously. Focusing so obsessively on only one aspect of this triumvirate will result in, at best, a lopsided development of one's human stature. And I'm sorry, but the quest for bodybuilding

immortality is the hitching of your wagon to a falling star, a moment in geologic time. Where are the champions of thirty years ago? Of twenty years ago? Of five years ago? No longer do they grace the covers of the industry's magazines; no longer do they endorse the latest products. Occasionally, they will attend the odd bodybuilding contest, where every three years or so they are paraded out en masse for the fans, to reassure them that there actually is a history to this sport. But then they disperse into the background like the wake behind a ship, waiting for the next event in which they might receive some acknowledgment. From what heights the mighty have fallen!



Despite being a devout student of the game, Mike Mentzer knew that building the body, while rewarding in its own right, is only part of the whole picture. To fully actualize his human potential, he developed interests that extended far beyond the posing dais. He would become (at different times) a color commentator for television, an author, a world-traveled lecturer, a video producer, and an innovator. (Photo by John Balik, courtesy of Weider Health and Fitness.)



Bodybuilding impresario Joe Weider (left) and Mike Mentzer (right) were both huge art fans, often attending art galleries and discussing the relative merits and demerits of a given artist's approach. (Courtesy of Weider Health and Fitness.)

Those who focus solely on their muscles or the trophies they win for developing their muscles never grow as human beings. They fail to develop any attribute that is not related to bodybuilding, and their resulting perception of their entire identity is confined to what they do (or did) as opposed to involving who they are or what achievements still beckon them further ahead on life's path. Such individuals want so badly to have external acceptance and recognition, to touch that flame of public adulation and momentary glory, that they seldom realize as they draw closer to the flame it will invariably consume them whole. (Incidentally, I say "momentary" deliberately, as anything that depends on popular support—from magazine exposure to bodybuilding championship victories—is never immune from the vicissitudes of change.) At some level, they must be aware of the transitory nature of their bodybuilding careers and conclude that rather than develop other interests so they can continue to grow as human beings (e.g., writing, music, painting, philosophy, literature, or learning a new trade or craft), they must direct their efforts to zealously guarding their small, dissolving fiefdom lest a more worthy or enduring figure might arrive on the scene.



Mike Mentzer understood that the mind and thoughts one chose to entertain and the values one sought to gain or pursue had an immeasurable effect upon one's character and outlook on life. He often communicated this point to audiences who attended his standing-room-only seminars on bodybuilding. (Courtesy of Weider Health and Fitness.)

Apart from Arnold, who is simply an archetype of this belief, other bodybuilders who have risen to the top of bodybuilding or who have made the sport their profession likewise subscribe to it and believe they must do everything in their power to keep others down or keep from them information that would prove of immense value to their life and bodybuilding careers. After all, according to the dictum, one does not seek to empower the competition—one must destroy it. "Machiavellian," "cutthroat," and "win-at-all-costs" are all phrases that have been adapted to represent this philosophy.

I'm proud to point to Mike Mentzer as a brilliant example of someone who was the antipode of this creed. Mike represented the attitude of attempting to perpetually improve one's self—rather than arrest one's development by suppressing competition. It's not an easy path to travel by any means, but all attempts to ascend to new heights are seldom without turbulence. In order to fulfill his stature as a human being, Mike believed he had to grow in all areas of his humanity. He studied philosophy to better determine truth from

falsehood, he studied art to understand both its meaning and purpose, he studied psychology to better learn the workings of the mind, he studied logic to learn the rules of correct thought, he studied the sciences to understand the workings of human physiology and how best to strengthen his body, he studied business to learn how to earn a living by working not for others but for himself and on his own terms, and he studied communication to better express to others the knowledge he had obtained. Throughout all of these varied disciplines ran the central thread of reason, which Mike held to be the passkey to all human progress. This is not to suggest that Mike was perfect (he would have been the first to admit he was not), but he most certainly made it a point to put forth the effort to fulfill his human stature and, unlike most, he was aware of the significance that attended one's doing so.

Mike understood that the mind, the thoughts one chose to entertain, and the values one sought to gain or pursue had an immeasurable effect upon one's character and outlook on life. It is no secret that he placed human reason on a pedestal—and with just cause: reason is what lifted people out of the caves, allowing them to make logical and informed choices in their daily lives by illuminating the paths they choose to travel and resulting in their only true sense of self-esteem. As Mike wrote in his only work of fiction, “The Integrated Man” (a narrative tale that proved to be his last writing and is included in his book *The Revised Heavy Duty Journal*, published by Mentzer-Sharkey Enterprises, Inc.):

The only way to gain an authentic self-esteem was through one's unswerving commitment to reason and reality. As reason is man's fundamental, defining characteristic, the one that distinguishes him from all other species, it was a man's commitment to reason as an absolute that should serve as the proper standard for measuring his stature. This was a biological fact of reality, and could not be debated. Those who had defaulted on their fundamental philosophic responsibility (namely, thinking) were of no concern to me. They were hapless individuals, who were constantly buffeted about by every chance intellectual trend that came along. ... When I attempted to politely explain this to the hysterics—the mystics, who were emotionally driven—in the gym, they seemed to regard it as heresy and declared me a lunatic. Not only did they not care, it frightened them, as what was most shatteringly terrifying to them was to be regarded as different, to lose approval of the pack. I, on the other hand, never suffered such a vice, the dire need for approval. Rather than be like a creeping vine climbing up a tall tree where I could not stand alone, I preferred to be intellectually, emotionally, and morally self-sufficient.

Proceeding from this base, Mike learned that the only meaningful rewards one receives in life are the ones achieved by the quality of one's work, which in turn are determined by the validity of one's ideas and the actions one employs to realize them. In the realm of bodybuilding, this refers to the ideas one holds with regard to training, dieting, and presentation. The successful realization of these “physical” goals underscores the efficacy of one's intellectual capacity to proceed to the achievement of additional goals, including those outside of bodybuilding such as interpersonal relationships, business ventures, and other areas of productive accomplishment. Moreover, the underlying ethos is progress—that is, continued improvement rather than stagnation. This willingness to grow (both physically and mentally) allows one to continue to improve oneself and to learn from both one's successes and mistakes.

Mike's viewpoint, of course, stands in stark contrast with Arnold's, both as a matter of approach and as a departure point for motivation. Bodybuilding writer Jack Neary reported that "after the [1980] Olympia, defending champ Frank Zane would ask Arnold why he came back to compete. And Arnold would tell him, 'To get back at Mentzer and Boyer Coe; to show them they can't get away with knocking me and my training.'" ([page 20](#) of the February 1981 edition of *Muscle & Fitness*, "Olympia Report: Arnold's Victory Creates Controversy & Bitterness," by Jack Neary).

Such a mind-set would have been entirely foreign to Mike; to compete to "show" others is external and unnecessary. Who cares what other people think about how you train? It's hardly worth the mental calories required to contemplate, as no matter what you believe, there will be others who disagree with it. Even in such an exacting science as mathematics there are disputes. Upsetting someone else's applecart for purely external motives reveals an interest more in the success or failure of others than in the improvement of one's self. As Mike used to say, "The only one you can accurately compare yourself to is you!"



Mike learned that the only meaningful rewards one receives in life are the ones achieved by the quality of your work, which in turn are determined by the validity of your ideas and the actions you employ to realize them. (Courtesy of Weider Health and Fitness.)

If, for example, two people of Mike's mind-set were competing for a bodybuilding title, they would use their faculty of reason to decide upon a course of training and diet to improve themselves to the point where they both would be at their absolute best on the day of the contest—physically and mentally. The one who made the more rational decisions in these areas would, as a result, be revealed as the best physique on stage, thereby validating not only his or her efforts in the gym, but the efficacy of his or her ideas and the potency of his or her mind. Restated, the idea is simply for you to use your mind in a specific manner that leads to self-improvement, rather than dissipating its energy by worrying about how others might think or what nefarious acts you can conceive and

execute in order to orchestrate the downfall or obstruction of others. As Mike once wrote,



Although Mike (right) had some terrific physique battles with bodybuilding champions such as Danny Padilla (left), he would never consider trying to sabotage any rival's chances of success. (Courtesy of Weider Health and Fitness.)

It would not be rational to enter a competition for the sole purpose of winning or to gain a sense of self-worth by beating others. The proper way to regard the entering of a contest is to view it as a spur one uses to get the best out of oneself, and nothing more.

To this end, Mike never attempted to undercut or sabotage his competition in bodybuilding, business, or life. In fact, he would often go out of his way to lend his genuine support to others, to help them achieve their goals, and to build on their achievements. Not to mislead you, Mike's benevolence in such matters was not motivated by altruism; it was rather because he wanted to elevate the standard of bodybuilding. Rather than suppressing the standard of competition, he had hoped to be part of the process of raising it and to do his part to live in a world of rational achievement. He knew that if he could help raise the standard of bodybuilding, the improvement of his fellow competitors' physiques would motivate him to become even better, rather than hold him back. The maxim "A high tide lifts all ships" finds application here. As he once related to me, Mike's actions stemmed from the ethical tenets of his personal philosophy, which were as follows:

The foundation of my ethics is ... "Rational Self-Interest," as opposed to self-sacrifice or the "good life," or any of the other floating abstractions that form the foundation of whatever other ethical system might exist, none of which sit well with me. It's important to point out that when one speaks of Rational Self-Interest, or the "Virtue of Selfishness," that there is a distinction to be made in types of selfishness. One should not confuse whim-worship or vulgar self-interest—the self-interest that a child might exhibit, where the value of the moment supersedes all else. A person who is motivated by Rational Self-Interest will not operate on the spur of the moment. He will think through and look long range at the ramifications of his actions and base his ethics, his behavior, on these considerations. Not the spur of the moment or the pleasure of the moment, but how his desires, his values, and so forth will affect him and those around him long range.



“It would not be rational to enter a competition for the sole purpose of winning or to gain a sense of self-worth by beating others. The proper way to regard the entering of a contest is to view it as a spur one uses to get the best out of oneself, and nothing more.”-Mike Mentzer (Courtesy of Weider Health and Fitness.)

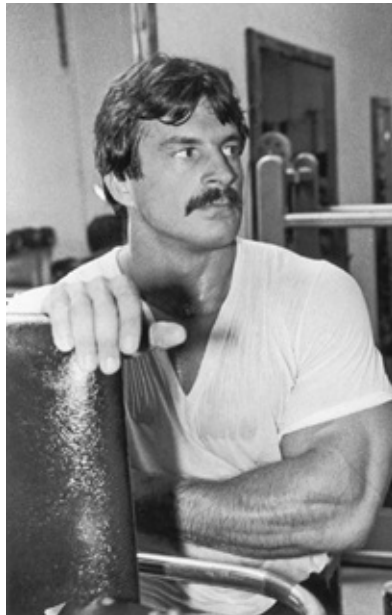
Having had the good fortune of knowing Mike for a period of some twenty-two years, I can cite many examples of Mike’s actions in support of this statement, but three will suffice.

The first is the helping of a fellow competitor in competition. Samir Bannout, “The Lebanese Lion,” was a man who was no small threat to any bodybuilder’s hopes of winning the Mr. Olympia title in the late 1970s and early 1980s. (He would win the title himself in 1983.) At the 1980 Mr. Olympia contest, Bannout was one of the competitors vying for the title against Mike. According to journalist Jack Neary who was present, Mike went out of his way to help Bannout recover from a serious diuretic miscalculation that could have proven to terminate far more than Bannout’s chances at this contest. Neary, in his contest report in the February 1981 edition of *Muscle & Fitness*, recalled,

Mentzer sat in his makeshift sauna the morning of the Olympia. It was then that a very excited Samir called that room. It seems, in his own bizarre way of shedding subcutaneous water, Samir took a Lasix tablet, a very strong, and sometimes unpredictable, diuretic that not only promotes a veritable Niagara of urine, but dangerously steals the body of its minerals, particularly potassium. And that’s bad news for the heart. That was exactly the news Samir was frantically telling

Mentzer. His heart was in the throes of an arrhythmic tap dance. On Mentzer's advice, we were dispatched immediately to Samir's room with a handful of potassium tablets. A scared but grateful Samir answered the door. Within minutes his crisis had passed.

Why would Mike do this? He could have told Bannout, "Hey, that's *your* problem; call a doctor and leave me alone!" As Arnold indicated, when a competitor comes to you for advice, it's not that hard to give the wrong advice. As this was the most important contest of Mike's life, he would be justified—under this philosophy—to betray Bannout's confidence and give him destructive advice. In fact, it represented a golden opportunity for Mike to put down the competition and according to the Arnoldian ethos, Mike could have achieved a victory of sorts, an extra safety measure, by ensuring that Bannout would not be a threat to him in this contest. Such a suggestion would, of course, be abhorrent to anyone who thinks rationally, as it would offend their sense of life. (In essence, a "sense of life" is the attraction or repulsion of an individual to an act or experience on an almost intuitive or more accurately, preconceptual level.) If Mike had chosen to do such a thing, it would have smacked of cowardice and revealed a less-than-praiseworthy character. But let's pass on for the moment.



Mike Mentzer helped many of his fellow competitors (even prior to important competitions) both during and after his competitive career. (Courtesy of Weider Health and Fitness.)

The second example is of helping a fellow business rival improve his product. At both the 1979 and 1980 Mr. Olympia competitions, Frank Zane was Mike's greatest rival. They not only competed head-to-head on the Olympia dais, but also in the business arena where both men sold training courses, seminars, and exhibitions. However, rather than plot ways to trip up his competitor, Mike gave Zane some valuable calf-training tips that Zane incorporated to good effect in his own bodybuilding training. According to Zane,

I became friends with Mike after the 1980 Mr. Olympia, Mike's last competition. Boyer Coe, Mike, myself, and our respective wives or girlfriends would often get together in Palm Springs and discuss the injustices of competitive bodybuilding. I

picked up a few good ideas from Mike in the early 1980s regarding training methodology: such as the importance of slow negatives, and a unique one-legged calf raise technique on the Nautilus multipurpose machine that resulted in over a half-inch calf growth in one month in 1981.

Again, why would Mike do this? Why assist another bodybuilder, a competitor, to enhance his “product” (which in bodybuilding would be one’s body), when so doing would only serve to enhance Zane’s already considerable position as a bodybuilder who knew whereof he spoke? (Zane was himself a multiwinner of the Mr. Olympia title.) Why would Mike aid a competitor in his quest for self-improvement? The answer should be coming into focus: to elevate the standard of bodybuilding, which in turn would serve to inspire others (including Mike) to elevate themselves in order to surpass the standard, thus making their own “product” that much better.

The final example is of encouraging healthy competition. In 1992, Mike Mentzer was preparing to reenter the bodybuilding world in a big way. He had just finished writing a new book entitled *Heavy Duty*, and he was deservedly excited at the prospects for its success. I should preface this by stating that Mike was coming off an unbelievably hard time financially. He had been absent from the muscle magazines for a period of four years, his income had all but disappeared, and he was staking his entire future—that is, his reputation and ability to earn a living—on the success of his forthcoming book, which contained his new conclusions regarding the actual science of productive bodybuilding exercise. At this particular point in time, no other bodybuilder had training courses on the market, so Mike would have had the entire field to himself. With no direct competition to be found anywhere, the success of his book would have been certainly ensured, if only by default.



Mike offered a valuable calf-training tip to his rival (and multi-Mr. Olympia winner) Frank Zane that resulted in Zane putting an extra half-inch on his already incredible calves. (Courtesy of Weider Health and Fitness.)



In 1992, Mike Mentzer not only helped the author launch a new book (*Power Factor Training*, Contemporary Books) by writing the book's foreword, but also contributed money toward its publication costs. (Courtesy of Weider Health and Fitness.)

At this point I, too, was preparing to self-publish a book on a new approach to bodybuilding, which would become *Power Factor Training*. But when I learned how much printing costs were, I quickly realized I could not afford to have my book published, as there wasn't sufficient money left over each month from my salary as a writer for *Flex* magazine. Joe Weider had graciously promised me ad space in two of his magazines, but without the money necessary to have the book published, I was all dressed up with nowhere to go.

When Mike learned that I lacked the money necessary to pay for the printing of *Power Factor Training*, rather than rub his hands in glee that a potential rival had stalled coming out of the gate (and make no mistake, we would have been competing for the same market), he provided me with the money I needed to publish it. Without his patronage, *Power Factor Training* would not have been published. Then Mike went one step further: not only did he provide the money necessary to have the book published, he even agreed to write the book's foreword! This undoubtedly resulted in thousands of his fans purchasing my book solely on the strength of his endorsement. The skeptic might say, "Well, he was a friend of yours, and friends help friends." Perhaps, although Franco Columbu may have a different take on this based upon his experience with Mr. Schwarzenegger. Mike's view of friendship, however, was predicated not on any sense of "duty to a friend" or on emotional whim, but rather on his ethics of rational self-interest. As he once related to me,

There's only one proper basis for choosing friends and that is mutuality of values. Most people exercise no discrimination in terms of thought or values in defining any relationship that they might be involved in or about to be involved in, whether it be the choice of a boss, a friend, a lover, associates at work, whatever. That which guides me is my rational self-interest, and in the realm of friends the only reasonable way—the only

rational way—to make a choice is through mutuality of values. How could I possibly share anything if we didn't share the same values?

Knowing this, I believe Mike's choice to assist me in the publication and marketing of my book was based, again, on his attempt to elevate the standard of bodybuilding. That is, he wanted to encourage the publication of a book that extolled the virtue of a more rational approach to training—as reason was a value we both shared and wanted to see flourish in the realm of bodybuilding. To conclude this interlude, I will say that when the tables of fortune were reversed between us, I was likewise happy to underwrite some of Mike's expenses. Not because I felt pity for him (anymore than he felt it for me), but because I believed in his cause and held his presence in bodybuilding to be a boon to those who sought truth. Mike's excellent and inspiring writing always served to motivate me to write better and think more clearly.

I cite the preceding examples because they speak to something bigger than muscles: they speak to an issue of character. Who wants a trophy not won by beating the competition at its absolute best? What would a trophy so received become a symbol of? Outwitting mediocrity? Defeating the disadvantaged? Anyone can win anything if the standard of competition is lowered far enough, but such are victories in name only. What, in the final analysis, was actually “achieved”?

The philosopher Bertrand Russell once said that we should think rather dimly of a soldier who refused to fight in battle unless he was first assured of victory. There is cowardice to such a man as contrasted with a man who strives to be the best he can and who refuses to compete against anybody who isn't likewise. Certainly it takes a strong will to hold to such a course. It would be far easier to sabotage someone else's efforts, to win a rival's confidence and then deliberately lead him astray and watch him fall—but such an approach also breeds a weak strain of man.

It was, therefore, unavoidable that two such contrasting personalities would collide in a universe as small as the one that the bodybuilding world orbits within. And indeed, Arnold Schwarzenegger and Mike Mentzer nearly came to blows during a backstage competitors' meeting at the infamous 1980 Mr. Olympia contest held in Sydney, Australia. Here is how Mike recounted the incident to me several years later:

What transpired was a heated argument, almost a physical confrontation, which arose from Arnold's behavior, from the disdain he showed to his fellow competitors. I think it originated when Arnold asserted his desire to have two weight classes for the contest when it had been agreed upon the year before that there would be only one weight class, one overall competition. And it appeared as though the mere whim of this one individual was going to supersede the conviction of the other fifteen competitors—a conviction that had stemmed back twelve months from the previous year's contest. I, for one, was stunned at the unwillingness or the inability of the IFBB [International Federation of Bodybuilders, the controlling or governing body of competitive bodybuilding to control Arnold's behavior and his aggressiveness during this particular episode.

And at one point, [fellow competitor] Boyer Coe, in order to stem the growing controversy and the heatedness of it—to try and cool it off—stood up like a gentleman, as he usually does, and suggested that Arnold at least tell us why he thought two weight

classes would be better; if he could give us a good reason for it then, what the hell, maybe he was right. But up to that point in time he gave no reasons, he merely was asserting his blind will, and that was obviously going to supersede everybody. Ben Weider was unwilling, or unable, to put any kind of a collar on Arnold and keep him under control.

And in response to Boyer's request for Arnold to give us the reasons why he wanted the two weight classes, Arnold stood up and shot over to Boyer, "Ah, come on Boyer, why don't you start talking like a man and stop talking like a baby?"

It was at that point that I stood up and said to Arnold, "Arnold, Boyer made a simple request for you to give your reasons why you wanted two weight classes and here you're the one who's talking like a baby now! Boyer didn't talk like a baby in the first place, but you've been talking like a baby all the way through!"

To which Arnold shot back at me and the whole assembled throng—there were about seventy-five to a hundred people in this big room: "Ah, come on Mentzer, we know the only reason you lost the '79 Olympia was because of your big, fat belly," or words to that effect. You know, the *ad hominem* argument.

At that point, I lost a little bit of my own control; I was getting very, very psyched up and aggressive for the contest which was imminent—I mean, we were literally "moments away" from the prejudging—everybody was seething back there waiting to tear off their sweat suits and start pumping up so they could release some of this building energy and aggression they were harboring. But at least we were consistent in our reasoning and our argumentation and our actions, but Arnold was flip-flopping back and forth, and asserting things that were irrelevant, all kind of craziness. Anyway, I shot out at him as though I were going to grab him—that was my first impulse—but by the time I arrived at his side—he was some twenty or thirty feet away—I had settled down. I didn't actually reach out to grab him, although [IFBB president] Ben Weider and a few others thought I was, and they were about to intercede and grab me. I made it apparent that I was not going to grab Arnold, but I put my finger right in his face and he sat back down like a little child! I forget exactly what I said to him, but it was something to the effect that he wasn't treating his fellow competitors properly, and I was not going to accept this kind of behavior—and I put my finger in his face while saying this and he refused to look at me! He was so embarrassed, which he should have been, that he couldn't look me in the eye—or anybody else! And then, later on, he had the audacity—which isn't surprising—to say that he "pulled off" that whole particular scene in order to cause all the "others to lose their control," when it was he, in fact, who was most obviously out of control.

Mike, who declared himself an Objectivist, believed in having ideals and in following the Objectivist ethic and aesthetic of man "as he *can* be and *ought* to be." His view of man was centered on productive (i.e., honestly earned) achievement. Such a man does not look for ways to diminish people or destroy their chance to advance. Indeed, the mind of such a man would recoil at the very suggestion of such a thing. Such a man chooses to build, progress, set higher standards—and then attain them. It takes character to choose such a direction and of course, it takes character to implement such an ethic. It is therefore no surprise that Mike held character building quite high on his list of human virtues and, in the scheme of things, why he was disappointed in Arnold. As he put it in what proved to be his final interview (published posthumously in *Ironman* magazine),

I told Joe Weider many years ago, I hope Arnold really learns to mature and actualizes his full potential, because he is quite an outstanding individual. He's had a tremendous success as everyone knows in the movies. In fact, I'll go even further, Arnold was my hero as an aspiring bodybuilder. I had pictures of him all over my bedroom wall, and almost worshiped the guy. I thought very highly of him. But after I got to know him I saw the moral flaws in his character.

I recall specifically asking Mike one day in 1986, "What builds character, and how does one cultivate it?" Mike's response was both revealing and insightful:

Well, one builds one's own character. The required first step is a choice. One's got to choose to build one's character; one's got to hold it as a value—that's the first step. Once one understands that one possesses the faculty of volition, or the power of choice, that particular individual will go about seeking the character traits and integrating them into his personality structure or character structure. The question for most people is "How does one go about doing that?" The first step after making, deciding, or focusing on the fact that he has a choice is that he has to decide what character traits he finds valuable and meaningful. Most people would agree on most of them. Some of the "eternal verities," so to speak, very few people would challenge the importance of character traits such as honesty, integrity, hard work, discipline, and so forth. Then when you get into the more debatable—from certain points of view—things such as altruism or self-sacrifice, there would be considerable area for debate. But generally, just to answer your question, the most important factor in going about building character is, first of all, to decide or choose to hold that particular value as a high value, a premium, in one's life, and then actually, the rest will fall into place. There are bound to be ups and downs along the way—even some mistakes made in terms of what's integrated—but if one holds Reason as a value, along with character-building, the rest will fall into place much easier. The very fact that a person would choose to hold character building as a high value would cause me to assume that the person is a "seeker"—that is, a "seeker" after truth. And if he was persistent and truly earnest in his desire to gather the truth, he would eventually happen upon the philosophies that the peoples of the world use to guide them in their actions, and he would have an increased chance to come across the philosophy of Reason. And again, once he discovered that, if in fact he did, then the rest would fall into place—were he to apply Reason consistently throughout his character-building program.



Mike Mentzer declared himself an Objectivist, subscribing to the philosophy of Ayn Rand. He believed in having ideals and in following the Objectivist ethic and aesthetic of man “as he can be and ought to be”—in all areas of human development. It is a view that centers on productive (i.e., honestly earned) achievement. (Courtesy of Weider Health and Fitness.)



“One builds one’s own character.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

In other words, one must hold the building of character as an attribute or value worth pursuing every bit as much as one pursues building muscles or a bank account. In fact, upon one’s death, the muscles and bank accounts are gone—the former to the flames, the latter to relatives and the government. In the end, it is only your character, or how you choose to think and act on Earth, that matters. If you choose to hold character building as an important part of your “body” building, you’ll come to realize that character is formed by the choices you make; how you choose to think and act holds significant (and often enduring) import. It is the power of choice and the power inherent in your choices that serve to mold you, your life, your character, and your legacy. Act with character, and time will be your eloquence.

And now, dear reader, we come to the fork in the road: the Arnold approach versus the Mike Mentzer approach, the Machiavellian versus the Objectivist. Do you try to sabotage others and by holding them down so democratize the standard of human achievement that it can be no better than it is right now? Or do you instead focus on your own progress and encourage others to do likewise so the standards may rise and yours along with them?

Ben Weider long ago took as his motto for the IFBB, “Bodybuilding is important for nation building,” which gives one pause to ponder which character type—if it predominated—would be capable of building a better nation. I leave you with a passage from Mike Mentzer’s favorite novel, *Atlas Shrugged*, by Ayn Rand:

Miss Taggart, do you know the hallmark of the second-rater? It’s resentment of another man’s achievement. Those touchy mediocrities who sit trembling lest someone’s work prove greater than their own—they have no inkling of the loneliness that comes when you reach the top. The loneliness for an equal—for a mind to respect and an achievement to admire. They bare their teeth at you from out of their rat holes, thinking that you take pleasure in letting your brilliance dim them—while you’d give a year of your life to see a flicker of talent anywhere among them. They envy achievement, and their dream of greatness is a world where all men have become their acknowledged inferiors. They don’t know that that dream is the infallible proof of mediocrity, because that sort of world is what the man of achievement would not be able to bear. They have no way of knowing what he feels when surrounded by inferiors—hatred? No, not hatred, but boredom—the terrible, hopeless, draining, paralyzing boredom. Of what account are praise and adulation from men whom you don’t respect? Have you ever felt the longing for someone you could admire? For something not to look down at, but up to?

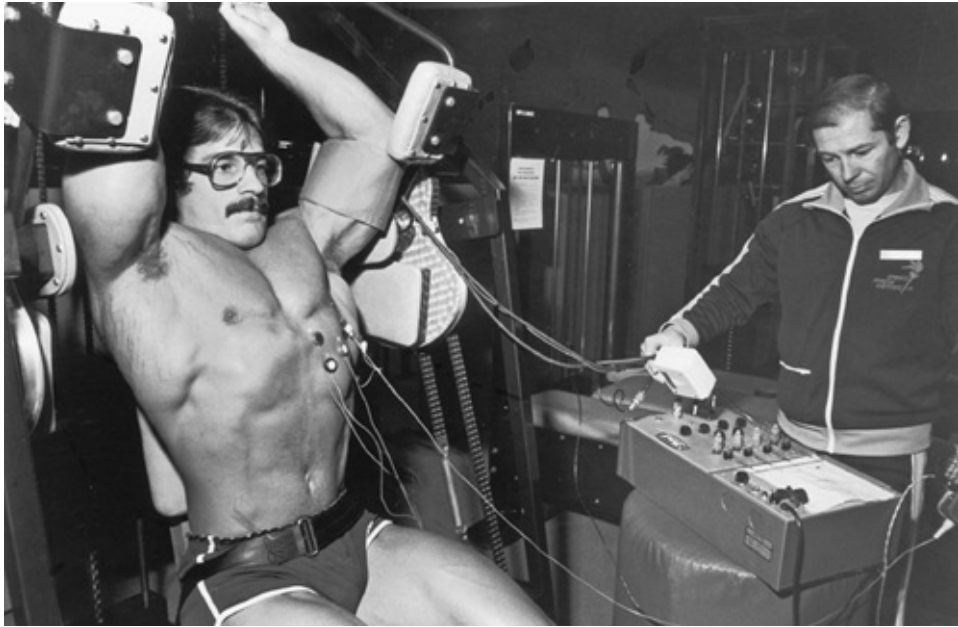


The success of Mike Mentzer's approach has stood the test of time. Act with character and time will be your eloquence. (Courtesy of Weider Health and Fitness.)

Quo vadis? The choice—and the consequences—are yours.

Part II

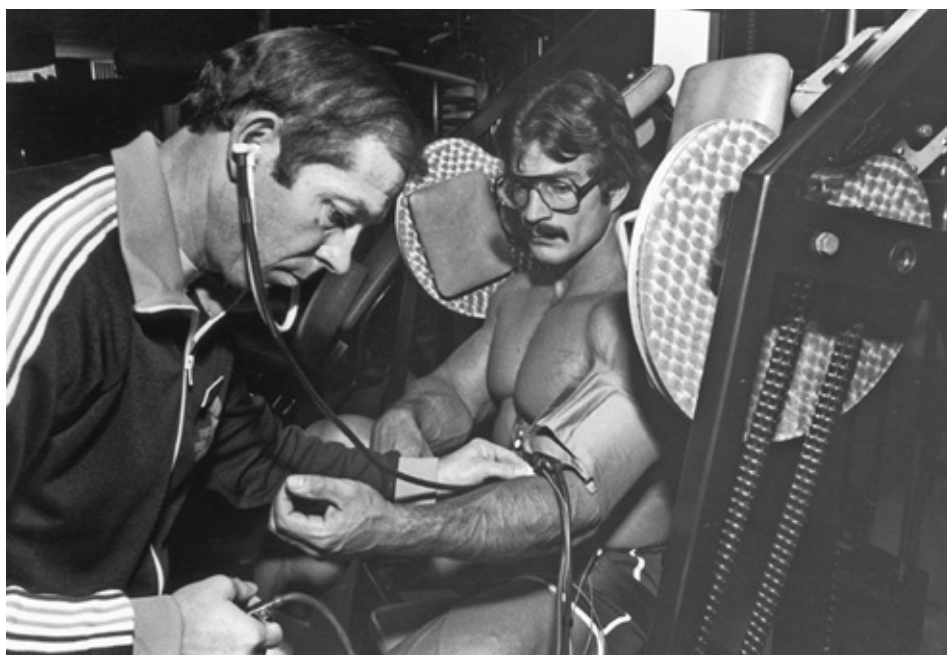
BODYBUILDING SCIENCE



(Courtesy of Weider Health and Fitness.)

Chapter 3

MIKE MENTZER'S HEAVY DUTY TRAINING PRINCIPLES



Mike Mentzer (right) viewed bodybuilding science as a discipline flowing from medical science. As a result, he was fascinated by the physiological effects of high-intensity exercise on the body. Here, exercise physiologist (and former weightlifting champion) Tony Garcy (left) checks Mike's blood pressure after an intense set of Nautilus pullovers. (Courtesy of Weider Health and Fitness.)

Mike Mentzer viewed bodybuilding as a discipline flowing from medical science. However, Mike also held that in order for bodybuilding to qualify as a legitimate science, it first had to be based on noncontradictory facts of reality. If bodybuilding could meet this simple criteria, then fundamental principles could be formulated that would support a valid theory, which in turn would effectively serve as a guide for successful human action in the arena of building muscle tissue beyond normal levels.

Moreover, once this was accomplished, then bodybuilding progress would not be something haphazard and experienced (if at all) in unpredictable, tiny dribbles every now and then. Rather, it could be something to be expected from every workout one performed. It is obvious that Mike didn't come to this conclusion blindly or as a zealot; rather, he understood that if a theory such as his Heavy Duty training system was valid (i.e., based upon the facts of reality), then it could serve as a reliable guide for successful human action.

As a result, Mike believed that there existed no reason whatsoever for one to waste even one workout by training blindly or unproductively. That is, every workout could, in fact, yield the trainee a real dividend, advancing him a step closer toward his ultimate goal of building bigger, stronger muscles. Mike recognized the obvious fact of reality that muscles are able to grow bigger and even stronger, and therefore, as a logical extension

from this, the *reasons* why the muscles grow could actually be discovered.

Formulated into principles, these reasons could form a legitimate theory of an actual science of productive bodybuilding exercise. In addition, once these principles were made clear, there would also exist a method by which one could determine whether or not one's workouts were successful—that is, whether they were advancing the bodybuilder closer toward his goal of building bigger and stronger muscles.

It was during the writing of his final book, *High-Intensity Training the Mike Mentzer Way* (which I had the honor of coauthoring with him), that Mike, in his final formulation of his Heavy Duty training system, first presented what he considered to be the seven principles of successful bodybuilding science:

1. Identity
2. Intensity
3. Duration
4. Frequency
5. Specificity
6. Adaptation
7. Progression

The discernment and implementation of these principles represented the fulfillment of a longtime quest of Mike's to use the mind to envision the principles and to use the body to apply them in training, thereby forming a perfect integration of mind and body.



Mike held the principle of identity (a principle from philosophy) to be the foundation upon which all knowledge is based. After all, if you don't know what you are dealing with, you cannot possibly know its nature, potential, and limitations. (Courtesy of Weider Health and Fitness.)

Mike held the first principle, identity, as the foundation upon which all knowledge is based. After all, if you don't know what you are dealing with, you cannot possibly know

its nature, potential, or limitations. Intensity is the principle that is the sole stimulus for muscle growth, whereas duration and frequency are mere corollaries of intensity and must be fully understood if the phenomenon of muscle-growth production is to be realized. Specificity is a principle that, like the preceding principles, is directly linked to the principle of identity and refers to how a certain type of training effort will yield a certain type of training effect. Building size and strength therefore requires a specific type of training (anaerobic and high intensity), and training in any other fashion (such as aerobic and low intensity) will not yield the results that training specifically for size and strength will. Adaptation indicates the nature of the body's physiological processes in the muscle growth process. Gaining muscle mass is an adaptive or defensive reaction of the body to the demands of a high-intensity training stress. The adaptive process applies to all human beings, as everyone possesses essentially the same muscle physiology. This means everyone responds to the stimulus of high-intensity training via a common process of physiological adaptation, with some requiring longer periods of time for the full adaptive process to take place and others requiring shorter periods (this ties in to the fourth principle of frequency). The final principle is that of progression, which simply means that the overload or training stress one places on one's muscles (and central nervous system by extension) must be increased on a progressive basis if continued progress is desired.

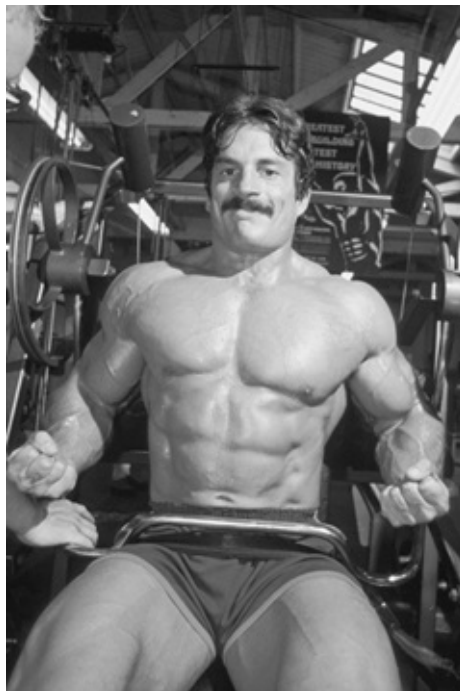
All of these principles were viewed by Mike as being interrelated. Indeed, he believed that one's ultimate success in achieving one's bodybuilding goals is directly proportionate to how well one understands and applies these seven principles. While a full presentation of each of these principles is beyond the scope of this chapter, it may prove helpful to revisit some of the more fundamental principles. For those who seek a more detailed presentation of these principles, I suggest Mike's final book, *High-Intensity Training the Mike Mentzer Way*, in which Mike devotes an entire chapter to each principle.

INTENSITY OR OVERLOAD

The first principle indicated that *the rate of improvement is directly related to the intensity of the training*. This means that the amount an individual improves is directly related to the degree of the overload imposed. Mike went into great detail on this important principle in the pages of *High-Intensity Training the Mike Mentzer Way*, and yet despite the efforts of Mike, myself, and other exercise science authors, the intensity or overload principle remains one of the more frequently misunderstood concepts in the realm of exercise. The term *overload* is tossed about quite freely in the bodybuilding world, but what exactly does the term mean? *Overload* can be explained in this way: the body receives no training effect from doing what it finds easy to do. To receive any benefit from his training, the individual must increase—beyond his usual level—the severity or intensity of the exercise he is performing. He must impose a demand on his muscles of a higher intensity than they are accustomed to in their normal, day-to-day activity.

If you make a simple movement, such as picking up a pen or some other light object, the muscles function without any trouble at all. No matter how many times you repeat such an action, you would not increase your fitness level. But if you make the load slightly heavier than what can be lifted easily, the muscles eventually increase in size to lift the load. For example, Mike Mentzer trained for a time with the preexhaustion principle,

wherein an isolation exercise is performed before a compound exercise (both exercises are performed in superset fashion to target one particular body-part). After a few years, however, Mike's muscles had adapted to the weights and protocol of preexhaustion. Mike reasoned that he had to discern a method to increase the intensity of his muscular contractions (i.e., the overload imposed on his muscles) to the point where the intensity of his contractions would be high enough to trigger another round of muscular adaptation or growth. He increased the intensity by incorporating techniques such as negative-only training, static holds, partial repetitions (in which weights much heavier than usual are employed, thus allowing the muscles to contract against greater resistance, albeit through a shorter range of motion), and Infitonic Contraction, which is where a maximum single lifting of the weight is immediately followed by a maximum negative or lowering of the weight. That is, when you have completed the repetition with the heaviest weight you can lift for one repetition, your training partner then applies downward pressure to the bar or weight stack to increase the effective resistance you must fight against as you lower the weight back to the starting position. Such techniques served to jump-start Mike's progress, and he gained well over ten pounds of muscle at an already super-advanced level of development.



Whether you train with free weights or machines, the greater the intensity, the greater the stimulus for greater size and strength. (Courtesy of Weider Health and Fitness.)

It should be pointed out, however, that overload is progressive in nature. In other words, you do not attempt to work out with the maximum load you can lift or to the point of exhaustion on your first trip to the gym. In fact, the degree to which you can overload a muscle will vary within the limits of individual capacities. But it is important that you overload it more than you would have done in the normal course of events. For although muscle tissue is used as the example here, overload is important in the training of all other tissues. For example, when training the cardiovascular system, people gradually overload their aerobic system by increasing the distance they run or completing the same distance in a shorter period of time.



Mike Mentzer understood that to produce specific adaptations in particular muscle groups, one had to train specifically to develop those muscle groups and to employ a particular type of training stress—namely, high-intensity muscular contraction. Here Mike hits a forearm pose—his forearm development was among the best in the business. (Courtesy of Weider Health and Fitness.)

SPECIFICITY

The fifth principle indicated that *the effects of training are specific to the type of training used*. In other words, you get what you train for. Many people waste a great deal of training time engaged in efforts that lead them in the opposite direction from which they intended to travel. Because they spend so much time at it, they can claim that they are doing a great *amount* of training, but often they could have achieved a much better training effect in far less time by following a more concentrated, intelligently planned program. The work you do in training or the effort you put into your training—if you desire to build bigger and stronger muscles—must be highly specific to the goal you have set. Mike Mentzer became one of the premier bodybuilders of the twentieth century, simply because he geared his training to produce such a result.

It should be obvious to most that you will get out of training only what you train to achieve, and little else. If you train by running long distances, for example, it doesn't necessarily follow that you will improve your ability to throw a baseball. Similarly, the individual seeking to increase the size and strength of his muscles must follow a course of specific activity geared to achieve this result. For instance, he would not gain greater size and strength from training himself to improve his stamina or his endurance. Therefore, training to improve your stamina should see you engaged in the specific activity or activities designed to do just that. There is very little carryover of training effect from one energy system (e.g., anaerobic) to the other (e.g., aerobic), from your strength training to your stamina or endurance training, or vice versa.

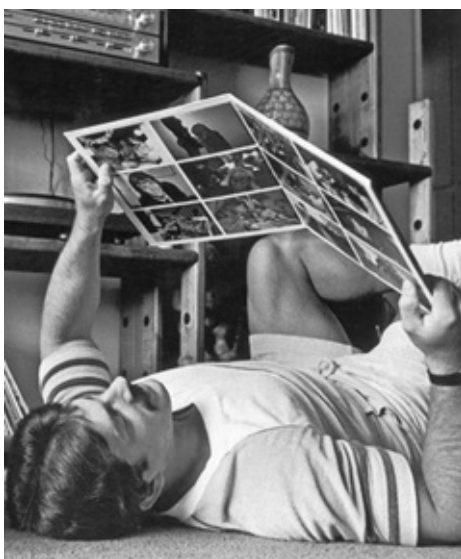
Furthermore, the movements that a person performs in any one skill are specially designed and specific for that sporting action. So if a person is going to train his muscles and nervous system for that skill, he has to practice the particular motions that are involved. Some people train for tennis by playing squash. But this is useless if you wish to become a first-class tennis player. The size of the ball is different, the weight of the racquet is different, the types of shot to be played are different, the reflexes needed are

different, and the intensity of the muscular contractions required to connect with the ball are different. Indeed, not a single type of reflex action needed for the one game carries over to the other. Think about what you want to train for, and adopt the appropriate specific training program.

FREQUENCY

Mike's fourth principle was frequency, and this referred to determining the optimal number of days off in between workouts in order to allow for sufficient recovery and adaptation (the sixth principle) to take place. Even a man as fit as Mike Mentzer seldom trained more than once every four to five days so as to allow for full systemic recovery. Sometimes he would take weeks or even months off from training entirely—although he never made a habit of this. His reasoning for infrequent training sessions was that he wanted to allow his recuperative subsystems adequate time to replenish themselves, for he knew that every increase in energy expenditure (i.e., through increasing the intensity of his muscular contractions) necessitated a decrease in training frequency.

A person training to develop his maximum potential in bodybuilding may in his zeal train so intensely and frequently that he taxes the physical recuperative subsystems of the body to the point where overtraining enters the picture and all progress comes to an abrupt halt. Most bodybuilders, particularly in the early stages of training, are so enthusiastic to build big muscles that they train many days a week, performing many sets of many different exercises—all of which drains their muscles, taxes their physical reserves, and arrests their progress. In fact, it takes considerable time to replenish the body's resources after a single, high-intensity workout. As his ability to make progress becomes compromised, the individual often will push himself harder in training, with the inevitable consequence that he becomes weaker and smaller—the very opposite of what he was hoping to accomplish with his bodybuilding training.



Without adequate downtime, all of your training efforts will be for naught. Mike Mentzer always made productive use of his time away from the gym, spending it reading, listening to music, tending to his mail-order business, or spending time with those close to him. (Courtesy of Weider Health and Fitness.)

If you find that in training your performances are deteriorating, check your program—

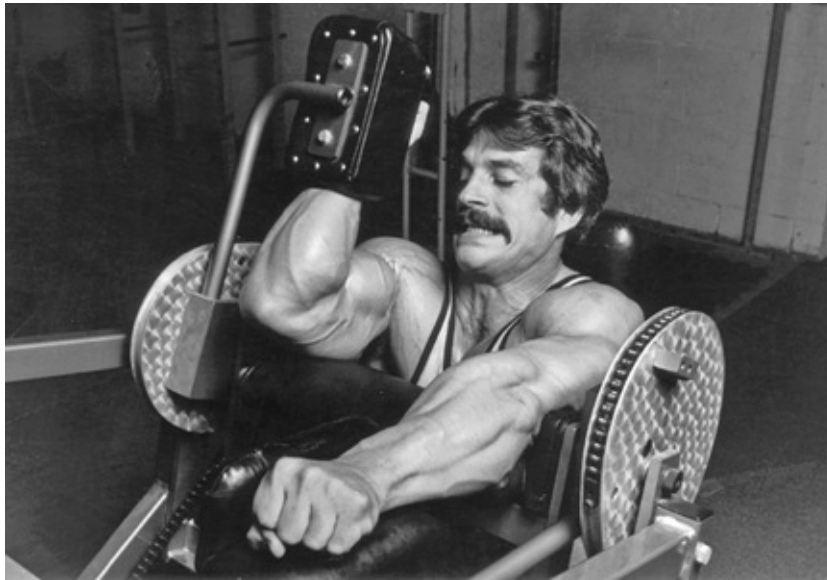
it may be overtaxing your physiological capabilities. Adjust your training schedule so you are not training too frequently, but don't let this discovery dampen your enthusiasm for training. This word of counsel brings us to another principle of training, what Mike referred to as "progression."

PROGRESSION

How do you know if you are training intensely enough to stimulate your muscles to grow bigger and stronger? How do you know if you are training with the optimal frequency to allow production of the muscle growth that you are stimulating? You can appeal to a standard to discover the answers to these questions; unfortunately, most bodybuilders use the wrong standard for evaluating their progress—the standard of *body weight* increases. According to Mike,

I know of bodybuilders who every time they walk into a gym, the first thing they do is step on a scale—and if they're not gaining weight every workout or every week, then they suspect something is wrong—and in most cases something is wrong, but it's not necessarily the fact that they're not gaining weight.

The problem of using a body-weight scale to measure your progress lies in the fact that *muscle growth on a daily basis—even at best—is negligible*. As an illustration, let's examine a best-case scenario: Suppose you have the required genetic potential to build thirty pounds of muscle this year. In addition, suppose you are also going to train properly and eat adequately in the course of the next year to make that thirty pounds of muscle gain a reality. As impressive a muscle weight gain as this is, thirty pounds of muscle gained over the course of a year averages out to only slightly over one ounce gained a day—which is not even enough to register on a typical body-weight scale. As there are sixteen ounces in a pound, if you were to weigh yourself each week on a certain day, you would only see a gain of a pound about every two and a half weeks or so. And if on that given day you had your haircut or had weighed yourself after a sauna or some sporting activity that caused you to sweat profusely, you might actually register a weight "loss" on the scale. Because muscular body-weight gains manifest relatively slowly, a body-weight scale is an improper tool or standard by which to measure whether or not you are on the right track on a workout-to-workout basis. What, then, is the correct standard of measurement to determine your workout-to-workout success or failure?



Strength increases should be the goal of all bodybuilders. If you want to get bigger, you have to try for at least one more rep than you were able to perform in your previous workout. Here, Mike Mentzer does just that during a set on the Nautilus multi-triceps machine. (Courtesy of Weider Health and Fitness.)

The appropriate standard to use for evaluating bodybuilding progress on a workout-to-workout basis is the standard of strength. When you are training intensely enough to stimulate muscle growth and you are training with the optimal frequency to produce muscle growth, your strength will be increasing. In other words, you will increase your number of reps, weight, or both on each set of every exercise you perform. This was the standard by which Mike determined the success or relative lack thereof of his clients. It is also why he had hundreds of clients who made continuous progress, increasing in reps or weight on every set of every workout for many, many months (in some instances, even years). According to Mike,

All of my clients—every one of them—make regular, continual progress without a doubt. Most bodybuilders don't know this, but, in fact, a properly conducted bodybuilding program is essentially a "strength training" program. Train for strength and evaluate your progress in terms of strength increases. Why do we use strength increases as a standard for evaluating bodybuilding progress, you might be wondering. Simply because there is a relationship between muscular strength and muscular size. If you want to get bigger, in other words, you've got to get stronger.

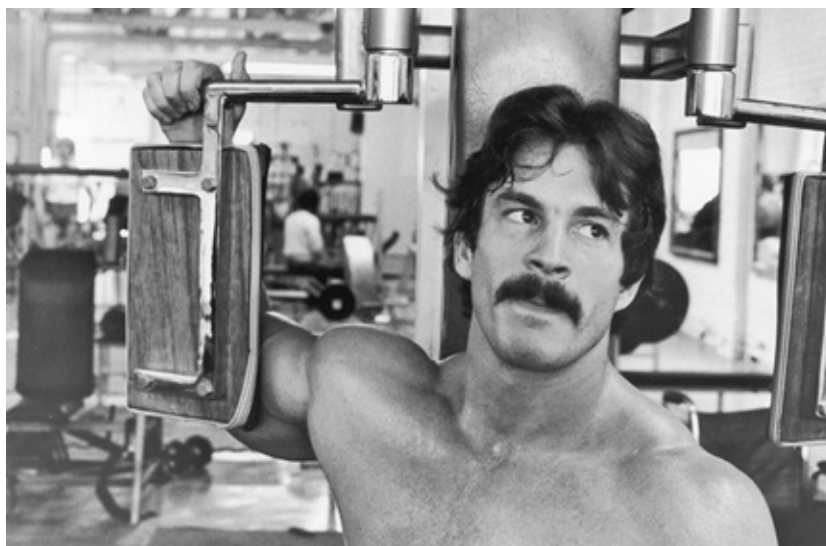
I emphasize this point because there is reluctance on the part of most bodybuilders to accept that idea. If you want to get bigger, you've got to get stronger. Just the other day in Gold's Gym a young man was arguing with me on this point quite vehemently and at some length. I finally stopped him and asked, "What are you supposed to do to get bigger—get weaker?" And he saw the relationship. "Furthermore," I said, "if there was no relationship between strength and muscular size it would be conceivable—if there was literally no relationship at all—that people like Dorian Yates could curl only twenty-five pounds—when in fact he curls over two hundred pounds. He got as big as he did, in part, because he got as strong as he did. If you want to get bigger, you've got to get stronger."

almost cover your dinner table. If you were able to sustain that rate of growth for two years, you would end up gaining 36 pounds of muscle. Imagine 36 individual one-pound beefsteaks on your dinner table!

That is the principle of progression. Increasing the intensity of your muscular contractions brings about improvements in strength and size. Then you have to increase the intensity or overload to new levels if you desire to progress further in size and strength. This sequential overloading of the muscles to high levels is called *progression*. That is, you progress to a new loading to maintain a situation of overload. This is done in all planned forms of training for all activities.

You increase the severity of the exercise because you have increased the resistance the exercise offers you. You can achieve this by increasing the amount of weight lifted, increasing the amount of repetitions performed (within limits), or reducing the time taken to do the exercise or complete the workout. Progressive overload is used particularly in weight-training programs, in which the load placed upon the muscles can be measured exactly.

The principle of progression is well illustrated by the legend of an ancient Greek, Milo, who lived in a town called Crotona. Conceiving the notion of progressive overload to increase his strength, Milo took a small bull calf and lifted it above his head. He did this with reasonable ease. Thenceforward, Milo lifted the bull above his head every day. The bull, of course, was growing steadily, but Milo's daily lifts trained his body to adapt itself continuously to each slight increase in weight. Eventually, Milo could lift the fully grown bull above his head. To the cheers of the multitude, he carried it around the arena of the stadium at Olympia during one of the ancient Greek Olympic Games.



There can be no doubt that Mike Mentzer was one of the most dedicated bodybuilders of all time. (Courtesy of Weider Health and Fitness.)

Obviously, Milo of Crotona could not have lifted a full-grown bull on his first attempt. However, by a gradual process of applying the principle of progressive overload, he was able to slowly, steadily increase the amount of resistance his muscles were made to contract against. As the bull grew heavier day by day, Milo was able to build up his strength gradually to the point where he could lift the great adult beast. Progressive overload made his task, a seemingly incredible feat of strength, not much more difficult

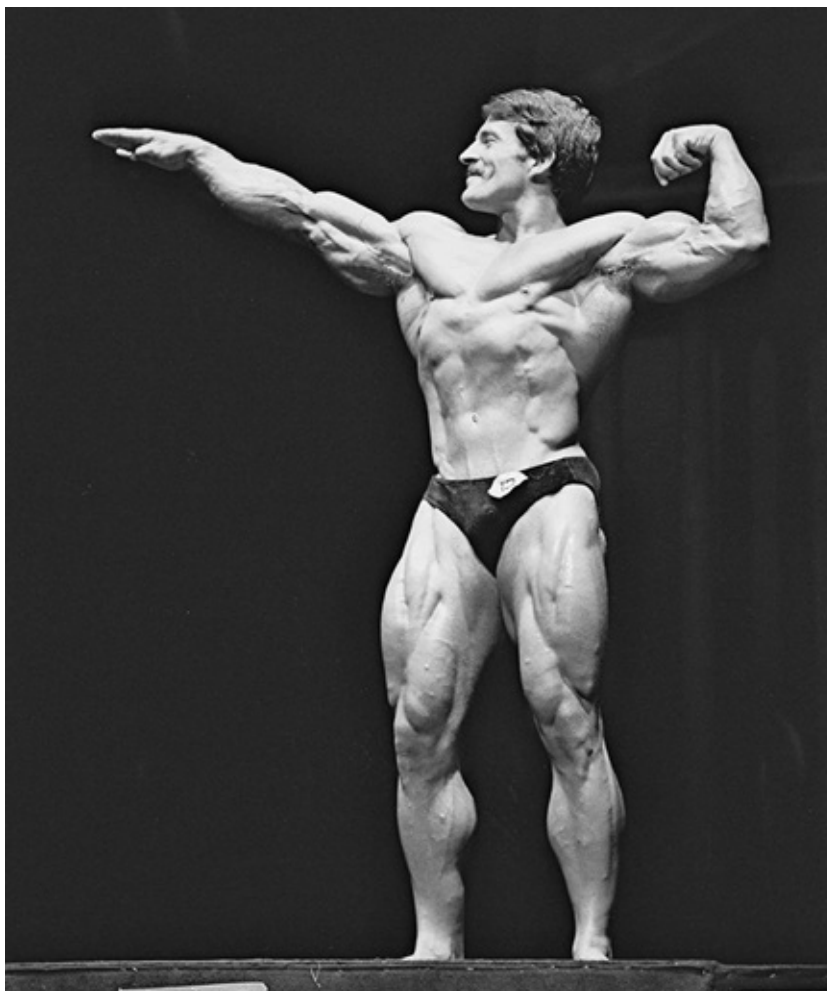
than the effort of lifting the young calf.

Frustration is often the greatest hindrance to bodybuilding progress. Of course, part of the reason for frustration is ignorance of the facts regarding the proper standard of measuring bodybuilding progress and the nature of the muscle growth process. The good news is that you don't need to be ignorant or frustrated. There does exist a proper, rational perspective within which to view your bodybuilding training that will allow you to fulfill your genetic potential for muscle building, whatever it may be.

DEDICATION

While dedication was not officially one of Mike's seven principles of high-intensity training, we can take it as being implied via the application of the others. There can be no doubt that Mike Mentzer was one of the—if not *the*—most dedicated bodybuilders of his time. Mentzer recognized the importance of mastering the psychological and motivational principle of dedication in his training, and he excelled because of it.

Like Mike, all bodybuilders and other athletes constantly face all sorts of problems, both physical (insofar as their experiences may involve discomfort or even physical pain) and psychological (such as boredom at the seeming monotony of certain exercises and training routines).



Mike Mentzer understood and made use of a scientific approach to his bodybuilding training, a decision that produced absolutely outstanding results. (Photo by Chris Lund, courtesy of Weider Health and Fitness.)

The average bodybuilder will quickly become bored with training and even more bored with the fact that he must engage in such training at regular intervals. Mike Mentzer found a way to overcome these psychological problems, and his way lay in the absolute dedication that he brought to his training program. It is the psychological factors that are the strength of a champion's makeup; regardless of the quality of his bones, muscles, and blood, his psychological drive will urge him on to overcome all the drawbacks and opposition he meets. As Mike said,

The first step, therefore, toward developing a Herculean physique, then, is to be able to create a strong and vivid image of the type of body you want. Without such a strong orienting vision, your workouts will lack the direction and meaning required for you to make maximum progress. It's important not only to visualize the long-range, ultimate goals, but to be able to summon our deepest energies for each and every workout. An impending contest will provide such a stimulus for many. For those who are not that far along in their bodybuilding careers, or perhaps aren't interested in competition, something else is needed—some emotional excitement, some idea of necessity to stimulate the will for that all-out effort in the gym.

You Have to Keep at It

Mike Mentzer realized that while it might take you a long time to reach a peak of condition, once you stop training, your fitness level may deteriorate quite rapidly. He also knew that it doesn't take nearly as much effort to maintain your fitness level once you've built it up. If you stop training, however, you'll deteriorate at a faster rate than the rate at which you built yourself up. The moral? You've got to keep at it.

Atrophy and Hypertrophy

In a related vein is the nature of atrophy and hypertrophy. If the tissues of the body are not used, they will deteriorate, degenerate, and atrophy and thereby become less efficient. This applies to all organs of the body, not merely the muscles, although the principle has particular application to muscles that are not used. On the other hand, a more intense use will develop parts of the body both in structure and function. The higher the intensity you subject a muscle to, the bigger it will get. This is referred to in physiology circles as "hypertrophy." With intense use, the muscles hypertrophy and improve in their function, thereby performing work more efficiently. Indeed, there is no training scheme that does not depend upon hard work for success.

HARD WORK: INTENSITY REVISITED

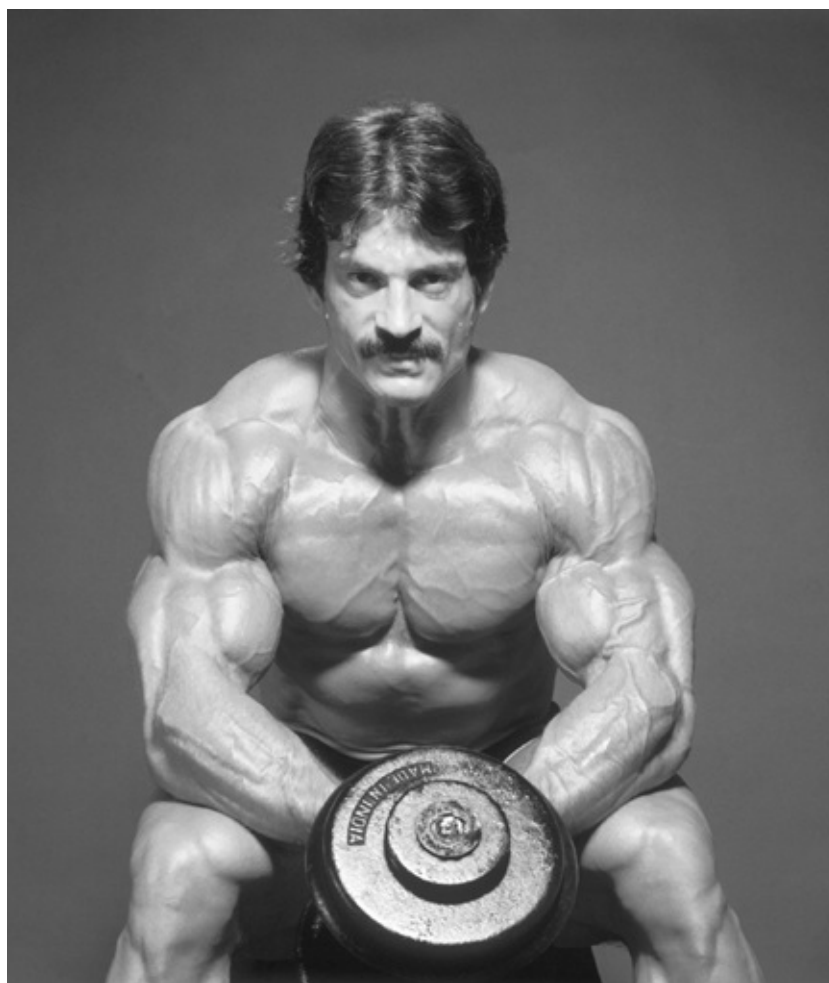
As I briefly touched upon earlier, it is self-evident that one must work hard with increasing levels of intensity to produce any beneficial effect from training. Given time, incentive, and the necessary guidance, it should be (at least theoretically) possible for people to achieve truly outstanding results from their bodybuilding efforts. They should be able to develop to their own individual bodybuilding potential just as Mike Mentzer did and by doing so, reach the full expression of their bodies. But time is always the basic problem. In spite of increasing leisure, other interests in this day and age leave the average person less and less time to spend on training. So training programs must be engineered to allow for

periods of intense, concentrated effort in the available training time. However, no matter how effectively or scientifically the training programs are improved and intensified, these words of Mike Mentzer remain true: “You can train hard or you can train long—you just can’t do both. And it just so happens that it takes hard training to build big muscles.”

Chapter 4

CONSOLIDATION TRAINING

THE ULTIMATE BODYBUILDING PROGRAM



(Courtesy of Weider Health and Fitness.)

If I can honestly say that I contributed one meaningful thing to exercise science it's this: as you get stronger and bigger you don't need to do more exercise—you need to do less.

–Mike Mentzer

Since working with Mike Mentzer on his last formulation and presentation of his high-intensity Heavy Duty training theory (*High-Intensity Training the Mike Mentzer Way*, McGraw-Hill Publishing, 2003), I have been asked the following question repeatedly by Mentzer fans and students of his belief system: “What do you believe is Mike’s greatest contribution to bodybuilding?”

The question is more profound than it appears at first read. Mike made so many contributions—from giving bodybuilding a philosophical base, to connecting bodybuilding to the science of stress physiology, to introducing bodybuilders to the concept of training more intensely and then giving them additional rungs to add to their ladders of intensity (such as Rest-Pause and Omni-Contraction training), to ridding bodybuilders of their aberrant dietary practices, to inspiring bodybuilders by his example as an individual standing up virtually alone to the Goliaths of the bodybuilding industry—

that it is difficult to quantify their significance categorically. However, all of the foregoing considered, I believe Mike's greatest contribution to bodybuilding is his insight into the nature of recovery ability. His discovery and proclamation that one needn't (and shouldn't) spend hours per week in the gymnasium to build a stronger, more muscular body is an insight and contribution of which the impact, I'm certain, will not be fully appreciated for many decades to come.

His contribution in this arena is in one respect the gift of time, saving bodybuilders thousands of hours (if not years) in wasted or unnecessary effort. At a time when champion bodybuilders were encouraging newcomers to train longer (up to forty sets a bodypart) and more frequently (twice a day, six days a week), Mike liberated bodybuilders from such a life sentence by pointing out that longer training actually impeded their bodybuilding progress. En route, he also pointed out that individual recovery ability varies across a rather broad continuum. As a corollary, he put a sharper point on the touchstone principles of high-intensity training (those of intensity, and volume or duration) and completely revised the principle of frequency.

In essence, Mike pointed out a better way: you can more efficiently realize your bodybuilding goals, and you can do so without living in the gym. More important, Mike didn't just say this—he also revealed how to accomplish it. Such liberation, freeing up as it does years of valuable life hours that can then be applied to earning a living, broadening one's understanding of the world around oneself, learning a new language (or languages), traveling, reading, writing, or perhaps most important, developing meaningful relationships or rearing a family, is a gift worth infinitely more than mere economic theory can frame. To make this gift possible, Mike created a precision workout that requires no more than 250 seconds of training time per week. I hold this passkey to the liberation of time otherwise misspent or irretrievably lost to be Mike's greatest contribution to bodybuilding, so let's examine Mike's Consolidation Training theory in a little greater detail before I present the incredibly potent workout that is its corollary and culmination.

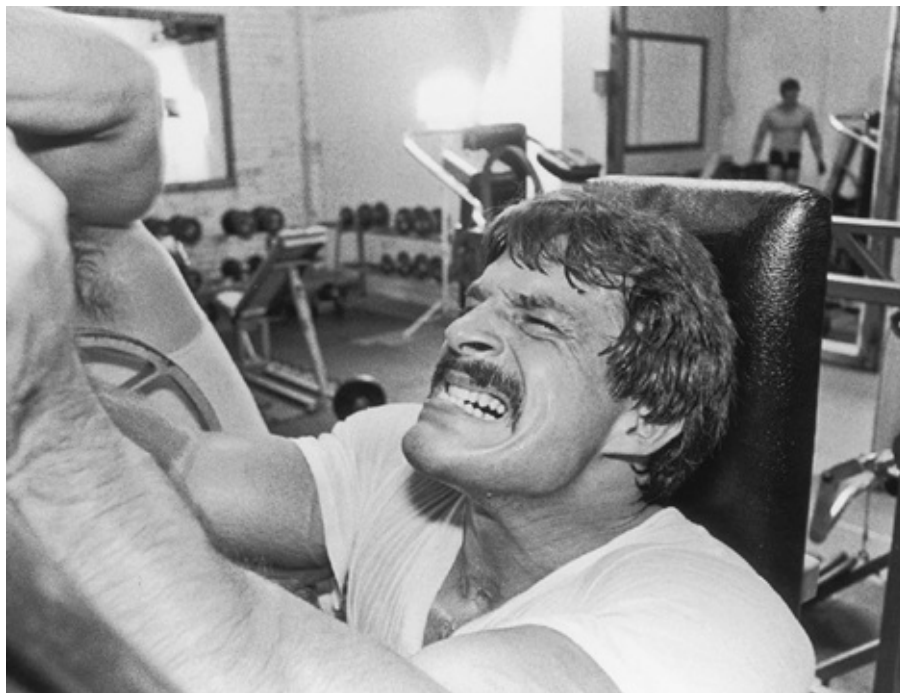
RECOVERY ABILITY: THE PROTECTION OF THE LIMITED

Throughout his training and personal training history, Mike made the observation that as an individual grows bigger and stronger, his energy output increases proportionally, and the heavier the resistance that the muscles are made to contract against, the greater the energy output that is required to perform these heavier contractions and the longer it takes these energy reserves of the human body to replenish themselves. Bodybuilders who ignore or otherwise fail to make their peace with this biological law will soon see their bodybuilding progress grind to a halt. The only way such plateaus or sticking points can be obviated is if the bodybuilder continues to make the requisite adjustment (by adding additional rest or recovery days into the training schedule) to compensate for the increasing demands of the training stress he is subjecting his system to in each workout.

Each time an individual becomes stronger, Mike explained, he has increased the intensity of his workout, and each time the intensity of his workout is increased, a corresponding adjustment must be made to the volume of his efforts during the workout. Just as an all-out sprint is more intense than a walk and thereby cannot be continued for as long a period of time (i.e., a person can walk for miles but only sprint for a handful of

yards), Mike realized, the same was true in bodybuilding training: the more intense the workout, the shorter its duration has to be.

For a beginner, the stress he can generate and thus subject his muscles to is minimal, with the result that he has the luxury of being able to endure repeated exposure to a low-intensity training stress (e.g., training with many sets, many days per week, and with many routines) and will make progress. Perhaps he will not make as significant progress as he would if he trained more intensely, but then again, a 12-inch arm contracting maximally does not place the same demands on the body's energy systems as does a 20-inch arm contracting maximally. A beginner's muscles are too "weak" to generate the intensity required to thoroughly tax the body's energy systems and thereby prevent recovery from occurring between training sessions. However, as the neophyte bodybuilder becomes stronger, his energy output and his ability to raise the stress he can subject his muscles to increases (in some instances quite dramatically), with the result that he quickly finds he can no longer recover and grow stronger in twenty-four, forty-eight, seventy-six hours or longer. It is at this juncture in his training career that the bodybuilder should begin to insert additional off or rest days into his routine and to reduce the duration of his exposure to the training stress.



“A 12-inch arm contracting maximally does not place the same demands on the body's energy systems as does a 20-inch arm contracting maximally.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

I recall discussing this topic in great depth with Mike on many occasions. We would often compare notes on how our respective trainees and clients were responding to taking more time off in between workouts and how rather than atrophying their muscles, they were growing stronger. This disproved the alleged 96-hour rule propagated by many high-intensity bodybuilding theorists—and by not a few college exercise physiology departments. Mike indicated that even one set taken to failure of an exercise made a huge inroad into a person's recovery ability (as compared to one's daily or nontraining activities) and that the performance of one set dramatically depletes the body of certain biochemicals and energy resources that simply take time to replenish. If the trainee

performs a particularly intense workout, these reserves will be enlarged upon to stave off the severity of the training stress, should it be encountered again in the future. Here is how Mike related this process to me:

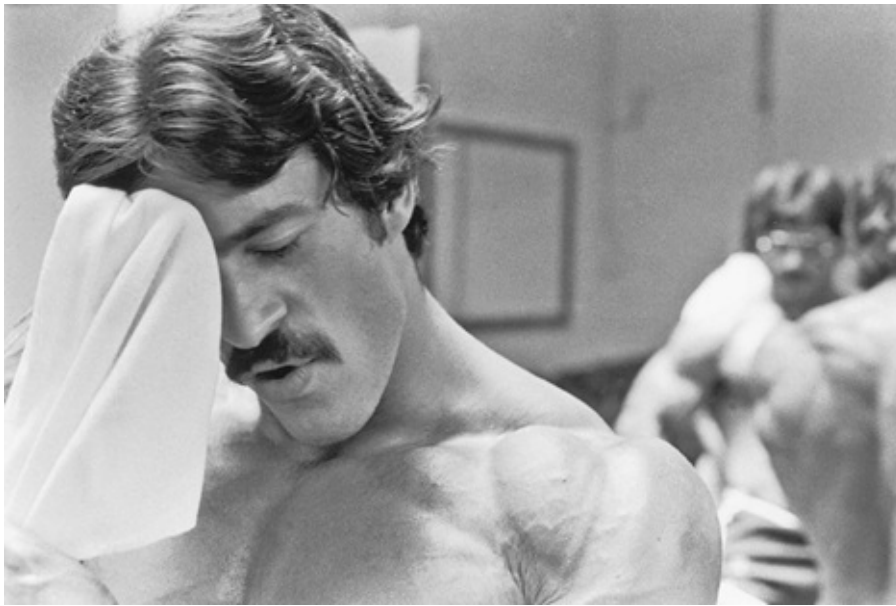
Mike: *You know, John, you've got to be real careful with this heavy, high-intensity stuff. I may have mentioned it to you before, but what I'm beginning to see a lot more clearly is just how demanding this stuff is. Arthur Jones said some years ago, "For every slight increase in intensity there has to be a disproportionate decrease in volume"—and he was not joking. This high-intensity stuff places a demand on the body of an order that is phenomenal. If you were to draw a horizontal line from left to right across a page, with that line representing "zero" effort, and then off of that line graph your daily effort output—for example, you get up in the morning, take a shower, scrub yourself down, dry yourself, walk to the car, climb some steps to get into a building, push a pencil, and so on—the graph representing that kind of effort output would barely leave the flat line; it would be a little squiggly sine wave. Then all of a sudden, you go into the gym and you perform a heavy set of partial bench presses or a set of heavy Nautilus laterals—whatever—all of a sudden, that little squiggly line starts to take off in a straight vertical line off the paper, out the door, down the street, and around the block! Now within that space is how much more biochemical resources are used up. Do you see how dramatic that is?*

John: Absolutely.

Mike: *I used to occasionally have, and still do occasionally have, people do a second set, for instance, of Nautilus laterals. And I realize that that kind of an increase is wrong [i.e., the second set]—it's way too much. Rather than have someone do a second set, what they should do is, maybe, an extra rep. ... You have to start out very, very small because, again, the demands from even that one set are of an enormous magnitude. And I'm beginning to understand much more clearly how precise all this has to be. Science is a precise discipline and there's no way of accurately measuring all these things, but there are accurate and precise ways of increasing volume, resistance, intensity, and all that.*

What I've come to understand more clearly is something else Jones said, and that is, "that from the time you start training you should be able to reach the absolute upper limit dictated by your genetic endowment within two years"—and he was right. If you are imposing a sufficiently intense training stress upon your musculature, and you are neither training too long nor too frequently, then you should be witnessing progress not on an irregular, haphazard, occasional basis, but every single workout. Now here comes the difficult part for most people: the general theory advanced by Jones over twenty years ago—train hard, train brief and infrequent—was valid, [but] there is a wide range of variation among individuals I'm seeing with regard to recovery ability—that is, the ability to tolerate intense exercise. Everybody needs intense contractions to stimulate growth, but what the individual has to work with is just how much volume and frequency he can tolerate. I have asked at least a dozen individuals over the last couple of weeks if they have not always noticed that even after a two- to three-week layoff, they come back and they're stronger. I have noted with all of my clients—I have had clients who were either forced to take layoffs or just took layoffs for whatever reason—that almost all of them expressed the anxiety, "Geez, I'm afraid I'm going to lose something." I've had people take up to three weeks off, and they almost in every single case came back stronger. I

asked Dorian Yates the same thing the other week, and he said, “You know, Mike, that’s true.” This is not just a minor point to be glossed over, John. I’m beginning to suspect this thing with frequency has a hell of a lot to do with it.



To the extent that you work out, or perform a number of sets, you make an inroad into your recovery ability. This takes time to fill back up. (Courtesy of Weider Health and Fitness.)

John: *Are you suggesting that perhaps in the future people could train intensely and then back off for two to three weeks before training again?*

Mike: *Maybe train each bodypart once every two weeks—why not? Progress should not be an unpredictable, irregular phenomenon if you are training intensely enough to stimulate growth. Growth is only stimulated during the workout, but if you’re working out too long and too frequently, you will short-circuit both the recovery and the growth process.*

It is important to note Mike’s distinction between the recovery and growth processes, for it is one thing to recover from an intense workout, but quite another to then grow or adapt from the workout. Perhaps his most succinct explanation of this distinction is to be found in the following essay entitled “A Problem Solved—the Issue Is Frequency of Training,” excerpted from the *The Revised Heavy Duty Journal*:

Immediately upon finishing a workout, you don’t feel the same as you did before the workout—you’re exhausted. This is the result of the fact that a considerable amount of your body’s resources had been used to fuel the workout. To the extent that you worked out, or performed a number of sets, you make an inroad into your recovery ability. Or you might say that for every set performed you dig a deeper hole. You perform one set, and you dig a small hole, a second set a deeper hole, a third set and a still deeper hole, and so on. The first thing your body must do after a workout is—not grow—but recover; that is, fill the hole back up, or as I like to say so as to be more precise, compensate for the exhaustive effects of the workout—recover, put back, replace what was there before the workout. The process of compensation, however, is not completed—zippo!—in five minutes after the workout. The full completion of the recovery process may take anywhere from one day to a couple of weeks! This will vary among individuals depending on numerous

factors including age, physical condition, nutritive equilibrium, recent training history, severity and length of the workout, not to mention certain genetic features. And it is only upon completion of the recovery process that the body may then devote its resources to growth, which is overcompensation. Remember, recovery is compensation, which is replacing the resources that the body had before the workout; growth is overcompensation, which is putting back more than was there before the workout.

Obviously the body cannot begin to overcompensate before it's completed the process of compensation. In other words, you can't build a mountain on top of a hole until you first fill in the hole! Assuming you've allowed enough time to elapse between workouts so the body has had sufficient opportunity to fill the hole, it can then start building the mountain—new muscle mass. However, the process of overcompensation, or growth production, doesn't happen instantaneously, either. Just as full recovery takes time (based on my experience, two to four days in most cases), full growth production requires some time. What I'm saying with regard to the issue of training frequency is that enough time must be allowed to elapse between workouts so that the body has sufficient opportunity to allow for both full compensation and full overcompensation—if optimal progress is your goal. If the body is disturbed by further exercise before such has happened, the growth production process will be short-circuited somewhere before completion. And either you don't overcompensate at all or you halt it somewhere in process, thus settling for something less than 100 units of possible progress.

This marked the epiphany that would inform all of Mike's future writings about bodybuilding, and he factored it into the workout routines he henceforth prescribed for his clients. Shortly before his passing, Mike related to me, "Two sets performed once every seven, eight, or nine days works almost like magic for the majority of bodybuilders I'm training." A team of exercise physiologists would in fact verify Mike's conclusion that *substantial* periods of time are required simply to recover from intense exercise.

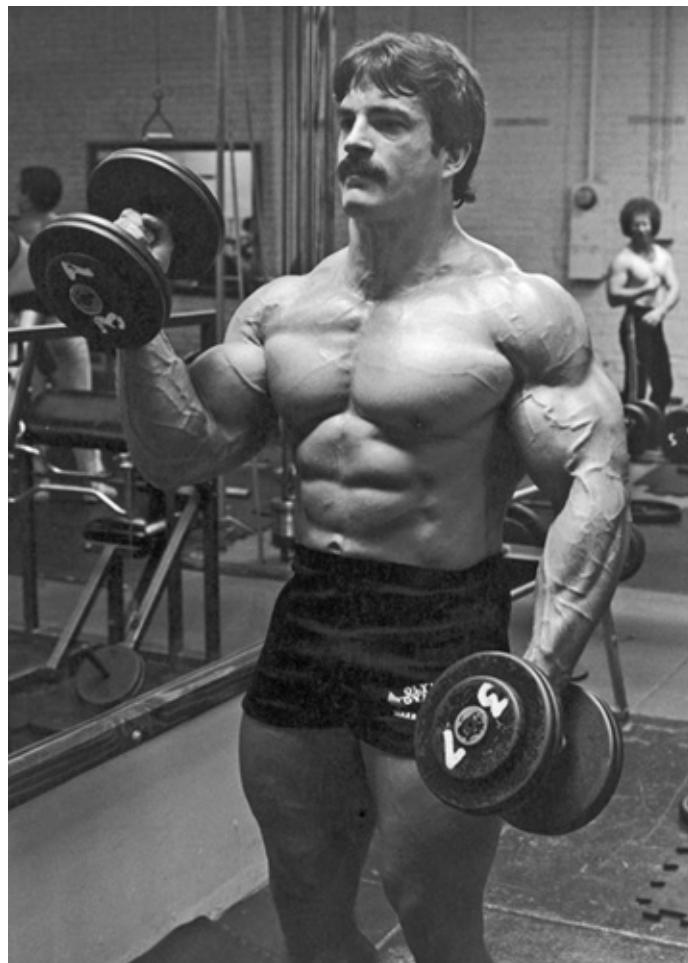
In a study that was published in the May 1993 edition of the *Journal of Physiology*, a mere six months after our conversation, it was reported that a group of men and women (ages twenty-two to thirty-two) took part in an exercise experiment in which they trained their biceps muscles in a negative-only fashion to a point of muscular failure. Negatives are considered by some exercise physiologists to be more intense than positive or concentric contractions because more weight can be employed, and thus the intensity of the exercise can be increased. In the experiment, the subjects sat on a preacher bench and performed three negative-only sets of preacher curls in which the resistance was raised for them, and they had to concentrate on lowering the resistance (determined to be 90 percent of their maximum isometric force capability) in a time span of five to nine seconds.

Typically, each set consisted of five to fifteen such repetitions. After a two-minute rest period, a second set was performed in this fashion with a resistance that had been reduced by 10 percent. After another two-minute rest, a third and final set was performed with another 10 percent reduction in weight. All of the test subjects were found to be most sore two days after exercising (a common occurrence, by the way), and the soreness in their biceps was gone by the ninth day. However, the fact that the subjects' muscles were still sore after nine days meant that they had not yet recovered from their workout, meaning that even more time was still required to elapse before overcompensation (growth) could

take place. Indeed, the day after their three-set workout, the subjects were in no condition to train again, exhibiting what the experimenters termed “a dramatic 35 percent loss of strength.” And ten days after the workout, the subjects’ recovery ability was only 5 percent better, as the experimenters noted, “even on the tenth post-exercise day the muscles had recovered only to about 70 percent of their control strength.”

If this rate of recovery is the “norm,” then we are looking at 5 percent every ten days, and the full recovery process may take anywhere from sixty to seventy days (or longer)—after only a three-set workout for the biceps! The experimenters, John N. Howell, Gary Chleboun, and Robert Conatser (from the Somatic Dysfunction Research Laboratory of the College of Osteopathic Medicine and the Department of Biological Sciences at Ohio University, Athens), concluded likewise in their summary: “Muscle strength declined by almost 40 percent after the exercise and recovery was only slight ten days later; the half-time of recovery appeared to be as long as five to six weeks.”

In seriously considering the preceding data, we are compelled to agree with Mike’s position that recovery from an intense training stress takes much longer than has been popularly presumed (up to ten to twelve weeks in certain instances!). That is to say, up to three months off might be required in order to simply recover from a high-intensity workout for the biceps. Also, as hard as it may be for some to believe, as the biceps are much smaller and weaker than the other muscle groups such as the legs, it is conceivable that the recovery process can take even longer for larger muscle groups that employ heavier weight and use up more of the body’s limited reserve of resources—and even *more* time must be allowed to elapse for overcompensation to take place.



A scientific study performed in 1993 established that an intense workout for the biceps

muscles can drain the physical system so severely that it can take upward of ten to twelve weeks to recover! (Photo by Jack Neary, courtesy of Weider Health and Fitness.)

Additional research, conducted on marathon runners some twelve years previously by Michael Sherman at Ball State University in Indiana, also indicated that the recovery period required after training can extend into months. In the January 1985 issue of *American Health* magazine, Stephen Kiesling reported the following on Sherman's research:

Sherman found that even after a full week of rest, marathon runners had not regained pre-race strength and power. Returning to [even] moderate running after the marathon delayed recovery. And some races may take months to recover from.

I'm not certain if Mike had the preceding studies in mind when he made the following observation on [pages 100 to 102](#) of his book *Heavy Duty II: Mind and Body*: "Recently there have been studies conducted at major universities, which revealed that overtraining can be so severe it takes up to six months to fully recover."

With this in mind, Mike's initial hypothesis of taking "two weeks off" between workouts now actually appears to be more conservative than radical. Nevertheless, Mike wasn't content to merely formulate an intriguing hypothesis—he knew he would need to test it on his clients in order for it to become a legitimate theory. So Mike took this new hypothesis into the gym and applied it to his personal training clients (who numbered over two thousand during his years as a trainer). I recall him telling me about one of his regular training clients who had upped his days off between training sessions from four to six to allow for more complete recovery and adaptation to take place. His client had called Mike the night before his scheduled workout was to take place and mentioned that he still felt very tired from his last workout session (three days previously), which had consisted of a mere four sets in which he had trained his shoulders and arms. Mike immediately told his client to take an additional two days off from training. As he told me,

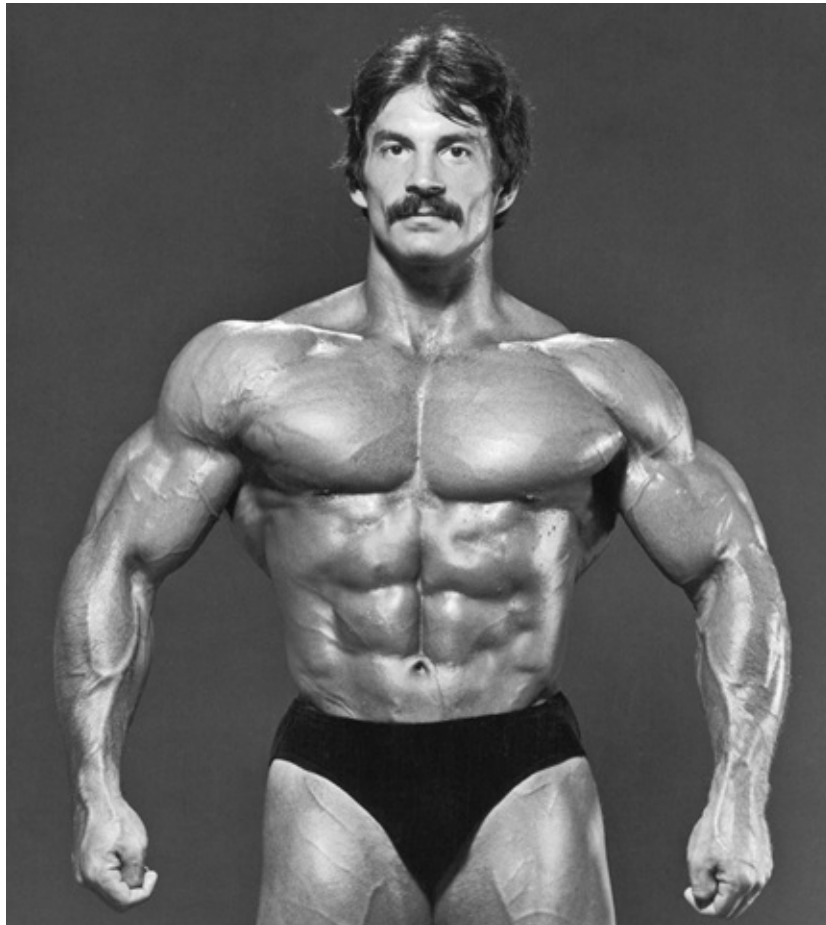
I explained to him that the two extra days off would not possibly pose the risk of a loss, no threat of a negative. However, it would most assuredly present the actuality of a positive: it would provide us with that much greater certainty that enough time had elapsed between workouts to allow for full recovery and total completion of the growth production process.

Mike understood from his hypothesis that if his client was still fatigued after three full days of rest, it was a clear indication that his body hadn't fully recovered from the exhaustive effects of his last workout, which meant that overcompensation, or the muscle growth process, hadn't even had time to be initiated. To further disturb his physiology at that point with another workout would only delay the growth production process that much more—indeed, before it even had an opportunity to be initiated. The success of this hypothesis (now a theory) was well documented in Mike's writings, as the following excerpt from *Heavy Duty II: Mind and Body* attests:

By the time he returned to the gym on day six, he stated he felt much better and was rarin' to go. It was his scheduled leg workout, and I bet him that he'd break his record best on leg extensions. I placed the pin in the last plate of the machine, which is 250 pounds, and

entreated him to give it his all. Talk about improvement! By repetition number twelve, it appeared as though he would continue forever. It was only by rep number twenty that he started to visibly fatigue, and he went on to complete twenty-seven reps to failure, breaking his previous best by seven full reps. What made it more interesting was the fact he hadn't trained his legs at all for a full thirteen days prior to this workout.

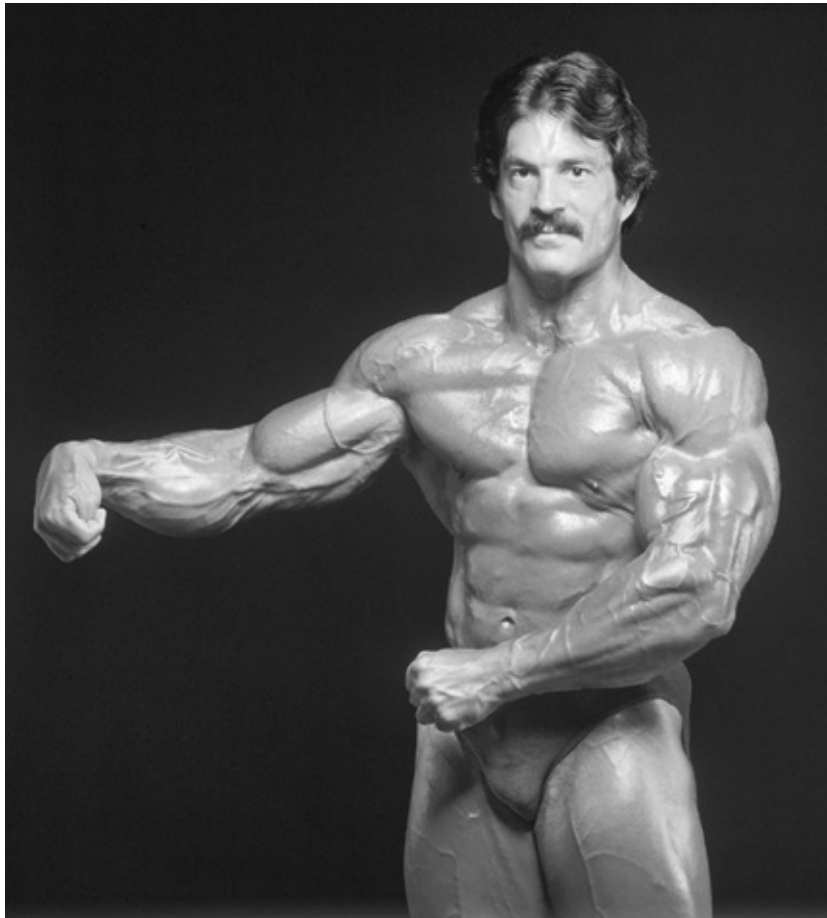
I should sidetrack here for a moment to mark the distinction between a theory and a hypothesis, two touchstones of the scientific method that are not well understood by most people. The scientific method involves logical inference from known facts followed by the forming of a hypothesis. The hypothesis is then tested through experimentation. When a hypothesis is 100 percent correct and has been verified and corroborated through experimentation and application, it moves from being a hypothesis to the category of being a theory. A theory, therefore, is not a hypothesis or a mere opinion. Isaac Newton's theory of gravity, for example, is not a hypothesis. The reasoning and mathematics that went into the formulation of his theory are tested and proven trillions of times per second in our modern world. Similarly, Mike's experimentation with his clients, in addition to the experiments of the exercise scientists cited earlier, have tested and proven Mike's hypothesis regarding recovery time, making it a bona fide theory.



“When in possession of a valid theory—no matter what the field of endeavor—and you’re making the proper practical application, progress should literally be almost spectacular all the time.”—Mike Mentzer (Photo by Bob Gardener, courtesy of Weider Health and Fitness.)

Mike once made the observation to me that,
When in possession of a valid theory—no matter what the field of endeavor—and you’re

making the proper practical application, progress should literally be almost spectacular all the time. ... So I continued with refining the application [of high-intensity training] to the point, starting February of 1995, where I achieved a level of understanding that “two and two is four.” Now someone said something to me the other day: “There goes Mentzer again—Mr. Omniscient—he knows everything.” I said, “Hold on. I didn’t lay claim to omniscience or infallibility; I don’t even pretend to have an exhaustive knowledge of exercise science. I merely said that I have a full grasp of the fundamental principles of anaerobic exercise.” I concluded by pointing out to this individual, “Didn’t you, Sir, master the fundamentals of mathematics: addition, subtraction, multiplication, and division?” He goes, “Yeah, yeah. I see what you’re saying.” I said, “OK. Give me a break; it took me twenty years to master the simple fundamentals of exercise. I’m a little slow, give me a break.” And that’s all it is: mastering the simple fundamentals. Which relate to, of course, the principles of intensity, frequency, and volume training.



Training of almost any variety creates far greater demands on the body’s recuperative subsystems than was previously thought. (Photo by Bob Gardener, courtesy of Weider Health and Fitness.)

The conclusion from both Mike’s pioneering insight and the startling success of its application in the training of his personal clients, as well as the scientific literature cited earlier, is simply that training of almost any variety creates far greater demands on the body’s recuperative subsystems than was previously thought, and indeed, that it can take weeks and months merely to *recover* from a single bout of exercise. This is important to remember, particularly in light of the workout routines advocated by many champion bodybuilders in the various muscle magazines, which would have the trainee in the gym several days per week without surcease.

The problem with the conventional (many days per week) approach should now be obvious: every set of a bodybuilding exercise drains the body of energy and makes an inroad into the body's limited reserve of recovery ability. The longer one trains, the more sets one performs, the more this reserve is used up, leaving less available to serve the needs of the growth mechanism of the body. Bodybuilders who train with multiple sets for multiple days each week are akin to the distance runners cited in the university study. Neither allow their recuperative subsystems the time required to replenish themselves, with the result that they grow progressively weaker and smaller.



A recent meta-analysis of all of the peer-reviewed scientific studies conducted to determine how many sets were required to stimulate optimal gains in strength and size came to the same conclusion that Mike Mentzer first told us about more than fifteen years ago: one set is all that is required. (Courtesy of Chris Lund.)

Mike believed that any set of exercise is a negative factor to the body in that it represents an energy expenditure or stress to the system that must be compensated for with additional recovery time. Therefore, the ideal objective for those seeking gains in strength and muscle mass should be to stimulate the body to produce such gains with the least amount (or volume) of exercise possible. Mike held that one set taken to the point where no additional repetitions are possible for a given muscle (what is commonly referred to as “one set to failure”) is all that is required to trigger the body's growth mechanism into motion. Moreover, once you have taken a muscle to this point, you don't have to repeat the process (i.e., perform additional sets). As Mike explained in *Heavy Duty II: Mind and Body*:

Once you've actually induced growth stimulation by reaching a point of momentary muscular failure, you don't have to do it again. Why? Because you've already achieved your goal of setting the growth mechanism into motion. It's like when you throw the switch to turn on a light—once you've thrown the switch, the mechanism is in motion, and you don't have to stand there flipping the switch up and down.

For those bodybuilders who feel that more than one set just has to be necessary to stimulate increases in strength and size, you might be interested in learning that Dr. Ralph N. Carpinelli, a professor of the neuromuscular aspects of strength training in the Department of Health, Physical Education and Human Performance at Adelphi University,

recently performed an extensive meta-analysis of all of the available scientific literature on the subject of one set versus multiple sets in training and came to the same conclusion that Mike reached, stating that,

Twenty-four out of twenty-five strength training studies reported that there was no significant difference in the magnitude of muscular strength or hypertrophy (when it was measured) between training with single versus multiple sets ... There is no evidence that a greater volume of exercise will elicit a greater response.



Despite using them in his competition days, Mike Mentzer came to realize that training various muscle groups with a series of specialized isolation movements, such as cable crossovers for the chest (pictured above), could quickly result in overtraining for some bodybuilders. (Courtesy of Weider Health and Fitness.)

As Mike used to say, “Any amount of exercise beyond the least amount required is overtraining.” And one set, obviously, is the least amount required.

THE EVOLUTION OF CONSOLIDATION TRAINING

After applying the preceding theory to more and more of his personal clients’ training programs, Mike noted that all of his clients responded with greater gains in strength and muscle mass. This led Mike to develop the “two sets, once a week” workout routine I’ve been alluding to throughout this chapter.

The genesis of this workout occurred after several of Mike’s clients had ceased to make progress on the “once every four to five days” split routine he had been advocating. It occurred to Mike that these clients were still not recovering; they were still performing too much work in their workouts to allow for full adaptation to take place within the confines of the five-to-seven-day recovery period. It then dawned on him that training various muscle groups with a series of specialized isolation movements, such as he had been advocating, could quickly result in overtraining, as all of the muscles were being trained in varying degrees each and every workout. For example, when training the back muscles, Mike would typically have his clients perform a set of close-grip, palms-up pulldowns. This exercise stimulates not only the latissimus dorsi muscle of the back, but

also the rear deltoids, abdominals, biceps, and even pectorals to a large degree. To then go on and perform direct exercises for these bodyparts was simply overkill, as all of these bodyparts were adequately stimulated from the performance of that one exercise.

Mike reasoned that if these extraneous exercises were removed, leaving only certain select exercises that would serve to stimulate the major muscle masses of the body, that was all that was required for bodybuilding purposes. Mike then began a quest to find out just what the optimum exercises and optimum number of such exercises per workout should be.

In a manuscript he had given me to proofread for him prior to the publication of his book *Heavy Duty II: Mind and Body*, Mike had selected seven exercises and he then split them into two workouts of four and three exercises with one set each, to be performed seven days apart:

Workout One

1. Squats or leg presses
2. Standing calf raises
3. Barbell or machine rows
4. Dips

Workout Two

1. Regular deadlifts or shrugs
2. Close-grip, palms-up pulldowns
3. Presses behind neck

By the time of publication in 1996 of *Heavy Duty II: Mind and Body*, he had experimented further and had reduced that number of exercises to six in total, performing three in each workout, once every four to seven days in between Workout One and Two:

Workout One

Perform one set each exercise until failure.

1. Squats—12–20 reps (alternate periodically with leg presses)
2. Close-grip, palms-up pulldowns—6–10 reps
3. Dips—6–10 reps

Rest four to seven days before performing Workout Two. As you grow stronger and your intensity increases, insert an extra rest day or two at random.

Workout Two

Perform one set each exercise until failure.

1. Deadlifts—6–10 reps (alternate periodically with shrugs)
2. Presses behind neck—6–10 reps

3. Standing calf raises—12–20 reps



Mike Mentzer incorporated the shoulder press exercise in the earlier versions of his consolidation routine, but later dropped it believing that the shoulders and triceps received adequate stimulation from chinups and dips. (Courtesy of Weider Health and Fitness.)

Rest four to seven days before performing Workout Two. As you grow stronger and your intensity increases, insert an extra rest day or two at random. Start over again with Workout One to begin a new cycle of workouts.

Further refinement in the routine occurred in 1998, after Mike had experimented with more clients, resulting in Mike reducing the number of exercises to be performed per workout again. This time, he reduced the number to just four exercises in total that in his estimation emphasized all of the major muscle groups of the body and removed the liability of overlapping muscle stimulation:

Workout One

1. Deadlifts
2. Dips

Workout Two

1. Squats
2. Lat pulldowns

As an example of this workout's potency, Mike indicated to me the success of two of

his clients while on this abbreviated or consolidated routine. One client went from a body weight of 160 pounds to 210 pounds in just three months (with a total of twelve workouts lasting a mere 2 to 4 minutes each), while another client went from a body weight of 158 pounds to 175 pounds in two months—all of it lean muscle. Now think of when the last time was that you gained thirty pounds of muscle in so short a span of time. If even one of his clients made such dramatic gains, it would be sufficient to suggest the validity of this approach; that there were (and are) many others who have also gained like this strongly indicates the potency of this workout as a muscle builder. When you compare the efficiency of two to four minutes once a week in gaining thirty pounds of muscle versus one-hour workouts performed four days a week (a popular current training approach), it becomes readily apparent that Mike's approach is revolutionary in its gains-per-minute of time investment. For those bodybuilders who were either very strong (and thus more prone to overtraining) or hard gainers with very poor recovery ability, Mike recommended the following two-set routine:

Workout One

Perform one set of each exercise until failure.

1. Squats—8–15 reps (alternate periodically with leg presses)
2. Close-grip, palms-up pulldowns—6–10 reps

Workout Two

Perform one set each exercise until failure.

1. Regular deadlifts—5–8 reps (alternate periodically with leg presses)
2. Dips—6–10 reps

THE EXERCISES EXPLAINED

For those who might be new to training or who would like to know Mike's recommendations for performing these exercises, let's examine each exercise in the above two workout routines in greater detail.

Workout One

1. Squats: Mike always advised performing this exercise in either a power rack with strong safety pins or a special machine with safety catches (such as a Smith machine). His advice regarding technique in squatting is as follows:

Place the bar on the upper back, below the nape of the neck, across the trapezius. With feet slightly wider than shoulder width and angled outward, descend in deep-knee-bend fashion with your back flat and head up until the thighs are parallel to the ground and no lower. Then immediately, without any bouncing, begin a controlled ascent to the top, straight-legged position. Once you've reached the top, pause only long enough to take a deep breath. Repeat. This works all of the thigh muscles together, though primarily the frontal quad muscles, and as you'll discover, serves to greatly stimulate the cardiovascular system. Warning: do not "drop" rapidly into a rock-bottom position where your buttocks

are almost touching the ground, and then bounce back up. Such a loose style of performance is a surefire prescription for injury. Remember: this is high-intensity, low-force exercise—the ideal, safest exercise possible when done correctly!

Perform one set of eight to fifteen reps until failure. (Note: The repetition range is simply a guideline. If you find that you can easily perform fifteen reps in the squat, then keep going until you reach failure. That is, if you can perform sixteen to twenty reps with a given resistance, do so until you are unable to complete another repetition in good form. This applies to all of the exercises listed.)

2. Palms-up pulldowns: While the pulldown is traditionally regarded as a latissimus dorsi exercise, it also is a very effective deltoid exercise and even more so a biceps exercise. The underhand grip is used because it places the biceps into their strongest position. Pull the bar from overhead into the chest around the mid-chest area, hold for a pause, and return slowly to the top. Repeat for six to ten reps until failure.

Workout Two

1. Deadlifts: Mike used to tell me that the deadlift was the most productive bodybuilding exercise as it activated and stressed the most muscle groups of the body. To quote Mike on the subject,

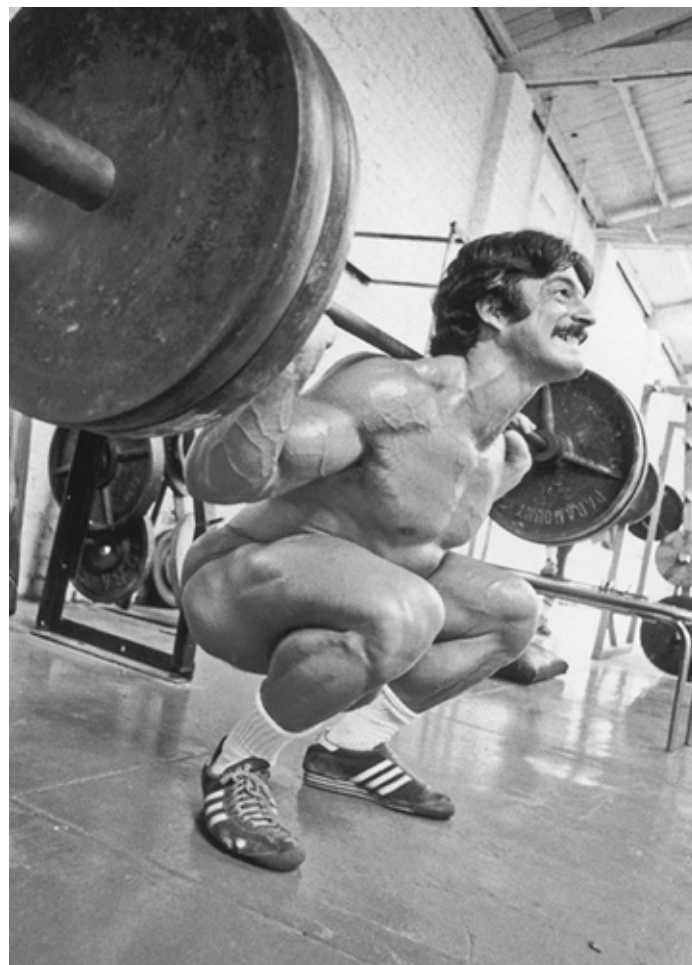
The considerable stresses involved make the deadlift the most productive exercise of all. The best way to visualize the proper performance of the deadlift is to imagine it as a combination of a deep knee bend and a toe touch. Start with the barbell rolled back flush against the shins, then grasp it with a slightly wider than shoulder-width hand grip. Bend down in such a manner that your shoulders are higher than your hips (or buttocks) and most important, keep your back flat and your head up. With arms perfectly straight, and no jerking or “pulling,” stand up with the bar until your body is perpendicular to the ground (there is no good reason to arch backward at the top). Upon reaching the top, pause briefly, and lower under control to the floor in the same manner as you lifted—back flat and head up. Once the barbell is on the floor, reassume the proper form, reset psychologically, take a deep breath, and repeat. This exercise works every muscle on the back side of the body from the calves to the leg biceps, gluteus, hips, spinal erectors, latissimus dorsi, deltoids, arms, and so on—really every muscle of the body.

2. Dips: To perform this exercise properly, take hold of the handles on a set of dipping bars and press yourself up to the top, or “locked out,” position, which is the position where your body weight is supported by your arms. Slowly lower yourself down until you feel a comfortable stretch in your pectoral muscles, and then after a brief pause, press yourself back to the starting position. Most commercial gymnasiums have dipping machines with a selectorized weight stack to one side, which allows you to sit on a seat and press down in dip fashion. This is great for those who are not initially strong enough to dip with their own body weight. While most use this exercise for triceps, it’s wonderful for stimulating the pectorals and the frontal deltoids as well. Mike referred to it as the “upper-body squat.” Perform one set of six to ten reps until failure.

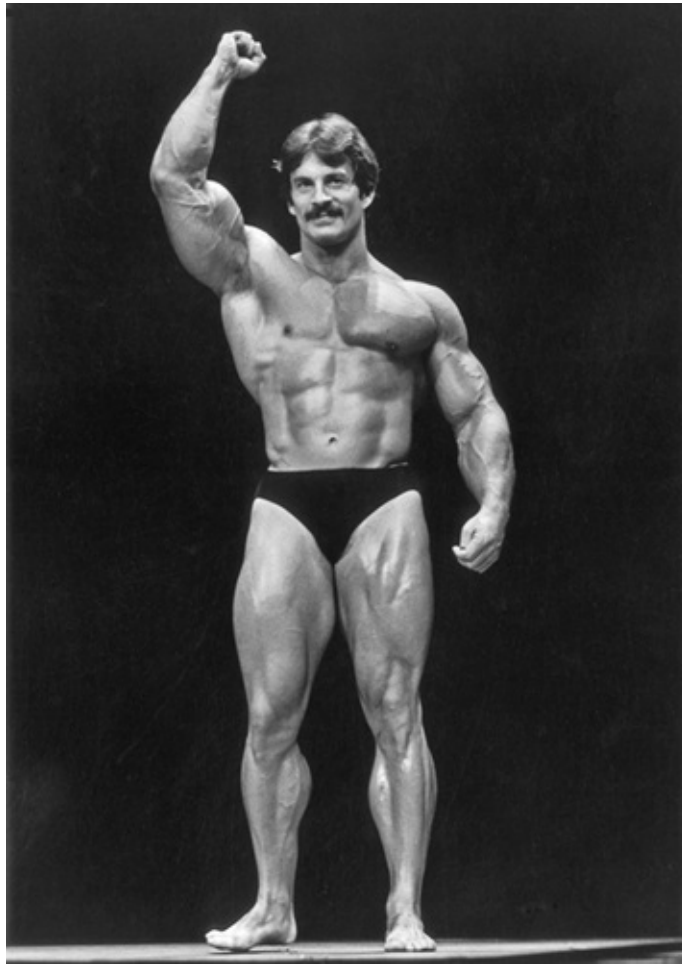
When a new client suggested to Mike that he felt like he could perform more exercises or more sets, Mike replied, “But sir, there are *hundreds* of exercises you could perform, but the idea is not to do every exercise in existence or to do as many as you can tolerate.

The idea is to do what is required by nature to turn on the growth mechanism and no more.” In fact, Mike would not infrequently point out to such people that most of the clients who came to him for training advice were already performing multiple-set routines for several days each week, which is what led to their lack of progress in the first place. Chronic, gross overtraining (as Mike referred to it), wherein the trainee performs set after set of multiple exercises per bodypart, is simply overkill.

Your objective with this routine should be to stimulate the major muscle groups of the body (for the greatest size gains) with the least amount of exercise required. As one set has been proven sufficient in this regard, only one set is recommended. As multiple muscle groups are activated and taxed through the performance of the suggested exercises, additional exercise is neither desirable nor necessary. Indeed, when one client ceased making progress with the preceding consolidated routine, Mike advocated even *less* training: “I dropped his volume and frequency until he was doing but one set every six days. Only then did he gain a little—five pounds in three weeks.”



Since most gymnasiums have barbells, Mike advocated the performance of barbell squats to stimulate all the major muscle structures of the lower body. (Courtesy of Weider Health and Fitness.)



The consolidated routine created by Mike Mentzer is quite possibly the ideal workout for all bodybuilders and what posterity may most honor his memory for. (Courtesy of Weider Health and Fitness.)

The requisite stimulus in the consolidated routine is high-intensity muscular contraction—the intensity of which will vary depending upon personal strength and conditioning levels. This is the requisite, whether you presently can squat 500 pounds or only 20 pounds. When the beginner or the advanced trainee has done all that he can—used up all the gas in his tank, so to speak, trying to squeeze out that last possible repetition—he will have effectively tripped the growth mechanism into motion. Once the growth process has been set in motion, it is unnecessary to perform any more sets for the same purpose. The variable that the individual trainee must attune to is not the intensity of effort (which should always be as high as a person is capable of generating), but rather the individual's own unique recovery ability. Owing to greater energy output, the more advanced trainee will require more time off to recover and grow from a high-intensity workout than the beginner, as it takes more out of one's physiology, systemically speaking, to perform ten reps of squats with 300 pounds than it does to perform ten reps of squats with 100 pounds.

When training on this consolidation routine, it is necessary to train as intensely as possible, and the more advanced trainees will require the employment of more advanced techniques such as Rest-Pause, negatives, and Omni-Contraction, which are presented in the next chapter. However, as Mike cautioned, it will be up to the individual trainee to determine their use.

The rewards from this consolidated workout are many: increased strength, bigger

muscle size, higher metabolism (which can parlay into reduced body-fat levels), increased vitality, and a more prudent use of precious and limited stores of adaptation energy. Once trainees have learned to judiciously regulate the volume and frequency of their exposure to the training stress, they will make progress in a matter of weeks that they have not experienced for years. And this progress will be continuous (in both muscle mass and strength) from their very first workout.

With this in mind, the consolidated routine created by Mike Mentzer is quite possibly the ideal workout for all bodybuilders—and as the opening quote suggested, the contribution for which we should most honor his memory.

Chapter 5

ADVANCED HEAVY DUTY TRAINING TECHNIQUES



(Photo by Caruso, courtesy of Weider Health and Fitness.)

Advanced bodybuilders have presumably exposed themselves to very intense training stresses for some time and will likely need an unusually intense stimulus to induce further growth.

–Mike Mentzer

Let's suppose you have been training with the Heavy Duty training system for more than a year. Your gains have been great during this time, but you notice they have slowed down. For some, they may have stopped altogether. This is typically the panic point for most bodybuilders. Is there a problem with the system? Should I be taking a new supplement? Do I need different equipment? More sets? More reps?

Relax. The answer to all of these questions is a simple no. All you need is an understanding of how your body adapts, and has presently adapted, to your current level of intensity. This understanding combined with more careful attention to your off, or recovery, days will in almost all instances result in continual improvement.

However, the advanced bodybuilder (e.g., one with at least two to three years of training experience already under his belt) whose muscles have grown accustomed to the rigors of Heavy Duty training needs something else, something a little stronger. He needs

the advanced-level Heavy Duty training techniques that were pioneered by Mike Mentzer during the latter stages of his own muscle-building competition days in the late 1970s and early 1980s. This chapter reveals these advanced Heavy Duty training techniques and puts you further down the road to becoming your own coach and trainer and to gaining a deeper understanding of the science of bodybuilding.

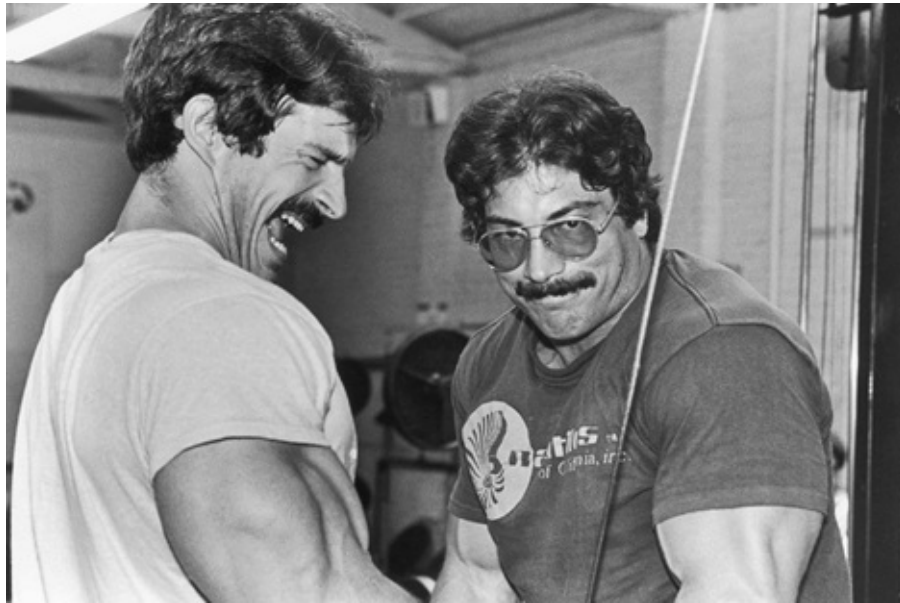
To begin, let's give Mike Mentzer the floor once more:

If nothing else, Heavy Duty has at least caused bodybuilders to start thinking. No longer do bodybuilders accept somebody's training routines or diet regimens merely because he has won some titles. We know by now that in the great majority of cases, it is a superior genetic predisposition that was responsible for the development of most champions. But let's go further than questioning any one individual's training practices and go right to the foundation of conventional training.

Where is it ordained, for instance, that one repetition must be followed immediately by another? Who says that a weight should be used in one's exercises that is heavy enough or light enough to be used for ten repetitions? Such questions are, of course, rhetorical, as we realize there are really no such rigid rules, and even further, these questions imply that most of us train according to custom, convention, and tradition. No one has ever scratched in stone that one rep must immediately follow another; it just seems the natural thing to do, so why do otherwise? And, what the heck, ten is a nice, easy round number, so why not do ten?

That intensity of effort is the single most important factor influencing the rate of skeletal muscle growth is a well-known point now. Muscular effort imposes a stress on muscles and overall physical systems, which causes people to adapt to that particular stress by developing larger and stronger muscles. And as Mike's quote at the beginning of this chapter indicates, as a person adapts to a particular training stress by growing bigger and stronger, such as a beginner does on a basic conventional routine, increasingly higher levels of stress are required if that person desires to continue progressing. As Mike pointed out,

Continuing to perform tasks, or lift weights, that are already well within our existing capabilities, will do little if anything to stimulate progress. Muscular growth, you must realize, is a defense against the stress of intense muscular effort. And muscular growth will cease when the effort you are generating in your workouts is no longer intense enough to threaten the body sufficiently to cause it to defend itself. That may sound a little technical and theoretical, but I believe it makes sense when you think about it.



Mike (left) and Ray (right) Mentzer were pioneers in the field of high-intensity training, creating and employing ultra-high-intensity training techniques to stimulate new levels of muscle growth. (Courtesy of Weider Health and Fitness.)

For the beginner in bodybuilding training, almost any type of training is stressful enough or intense enough to induce adaptation through size and strength increases. Going from no training at all to any type of training (even low or moderate intensity) represents a dramatic increase in the stress and intensity that the beginner's body is normally exposed to on a day-to-day routine basis. For a while, this will cause him to progress. Merely by adding weight to their exercises and by resting for shorter periods of time—that is, doing the same workout in less time—beginner and intermediate bodybuilders will progress. As beginner and intermediate bodybuilders progress to a more advanced stage, however, by adding muscle, the formula becomes more and more complex due to the changes in physiology that attend muscular growth.

Mike wrote and lectured extensively on the fact that the larger one's muscles get, the greater become the demands imposed on one's body's resources and reserves during these intense muscular contractions. Physiologists have discovered that the average individual has the capacity to increase his strength and hence his ability to generate intensity by some 300 percent, while his ability to recover from intense stress only increases by 50 percent. So as one gets bigger and stronger, the likelihood of overtraining increases dramatically.

Most bodybuilders, however, pursue a type of training that progresses in just the opposite way: rather than increase the intensity and reduce the duration of their effort as they progress, they decrease the intensity and prolong the duration of their effort. In other words, as they continue to progress, they think they have to make their workouts longer and longer. Invariably what has to happen because of the nature of the relationship between intensity and duration is that the intensity decreases and their progress slows down or comes to a halt altogether. Mike observed in early 1980,

About one and a half years ago I had reached an impasse in my progress. Though I was training in my usual fashion—that is, very heavy with all-out effort each and every set—I couldn't seem to add much in the way of additional mass. Discussing this thoroughly with a stress physiologist, I discovered that my body had adapted to a certain level of intensity

and to certain methods—namely, preexhaustion and forced rep training. The problem was that now I was so strong, and my ability and willingness to generate maximum effort so dramatically increased, that each rep of a normal six-repetition set was severe enough that the oxygen debt and lactic acid buildup was immediate from the first rep and prevented a maximum all-out effort at the end. What I needed was a method that provided for intense and maximal contractions, while slowing the buildup of metabolites and the onset of oxygen debt, which prevent ultraintense effort.

REST-PAUSE

The method that Mike found to fulfill these requirements was Rest-Pause training. With Rest-Pause training, he would first warm up a given area thoroughly by doing a couple of sets with a lighter weight, leading up to the heavy weight. Then for the first repetition of the set, he would select the maximum weight for a single attempt. As the lift was maximal, it ensured maximal muscular contraction and therefore maximum intensity of effort. After performing that first all-out rep, he would put the weight down and rest for a maximum of ten seconds to allow for the oxygen debt to right itself and to allow the waste products to exit the muscle. This also allowed his second repetition with the same weight to be another all-out maximum-intensity rep. Mike advocated having a partner for this type of training, as a bodybuilder might not be quite able to do a complete second repetition without a partner's assistance. However, as Mike advised, "Be sure that his assistance is just enough so that you are barely able to complete that second rep."



In Rest-Pause training, Mike (center) would occasionally need the help of a strong training partner, such as Ray (right), to help him complete his second all-out repetition. (Courtesy of Weider Health and Fitness.)

After his second rep, Mike would put the weight down again and rest for ten seconds. By this time, however, he would need to reduce the amount of weight he was using by roughly 10 percent so he could perform the third rep all by himself. After ten seconds' rest, Mike would pick up the reduced weight and perform another deliberate, controlled rep. Then he would take another ten-second rest before initiating his fourth and final rep, and he often required the assistance of his training partner merely to complete that fourth

repetition. As Mike suggested,

I wouldn't try to do more than four or five reps—at the very most—in Rest-Pause fashion, as it is very intense and demanding. So demanding that you really can't appreciate it until you've tried it. You must realize that with Rest-Pause training, every single rep of the set is an all-out maximum effort—not just the final rep as is the case with conventional methods. This is what makes it so different and so productive. The intensity has taken a quantum leap upward. I would also recommend no more than one set per exercise in Rest-Pause fashion for the same reason. Remember, I can't stress this enough, the higher the intensity, the greater the likelihood of overtraining. Remember that once you induce muscular growth stimulation through hard training, you must allow that growth to take place. If you're constantly overtraining and not giving yourself enough time between workouts to recover, then how could you expect to grow? Remember, you've got to recover first; growth takes place second.

Mike further advised advanced bodybuilders not to do more than a total of one Rest-Pause set per bodypart, and that the advanced trainee could incorporate Rest-Pause into his normal Heavy Duty routine. For instance, when training your chest you might do one set of dumbbell flyes or pec deck to positive failure, followed immediately—as the second set of a preexhaustion cycle—by one set of incline presses Rest-Pause style.

If you are an advanced trainee and desire to try Rest-Pause exclusively, Mike advised that you not continue the program for more than four to six weeks, as it is as mentally demanding as it is physically and can cause you to burn out and lose motivation. Mike advised all those training with Rest-Pause to adhere to the fundamental Heavy Duty concepts for best results:

1. Perform all movements very deliberately and under control. Don't try to yank, jerk, or bounce heavy weights—that's what causes injury to the joints. Lifting heavy weights does not cause injury; it's when you try to bounce, jerk, and thrust the heavy weights by using the force of momentum that you injure the connective tissue.

2. Always emphasize the negative, or the lowering, of the weight. Most exercise physiologists believe that the greatest benefit to be derived from weight training comes from the negative aspect of the rep—that is, from lowering the weight.

3. Keep your sets low. Never, never do more than three sets per bodypart. As you continue to progress, it's somewhat natural to want to add more and more to your workout because your enthusiasm is growing and your energy is burdening. However, as Mike pointed out, perhaps the most important exercise you can perform is the exercise of *restraint*. Restrain that tendency to want to do *more*. Remember your body always has to recover, and when you do too many high-intensity sets, you're not going to give your body enough time to recover between workouts.

4. Never train more than once every four to seven days. And in some cases, even once every four to seven days is too much training. What should guide you is how much progress you're making. If you don't realize immediate progress from Heavy Duty training, then you are probably not giving yourself sufficient time to recover. The intensity of effort involved in Heavy Duty training is more than sufficient to induce growth stimulation. So if you're not realizing such progress, then you're not giving yourself

enough time to recover between workouts and grow as well. Maybe training once every eight or more days would be better. Again, these things aren't preordained, they're not etched in stone, and nobody ever said that you *had* to set up your training routine according to a rigid seven-day-a-week schedule. Maybe once every eight or more days would be best. If the intensity is sufficient, then the only other factor that can be blamed for your not realizing more progress is *insufficient* time to recover between workouts.

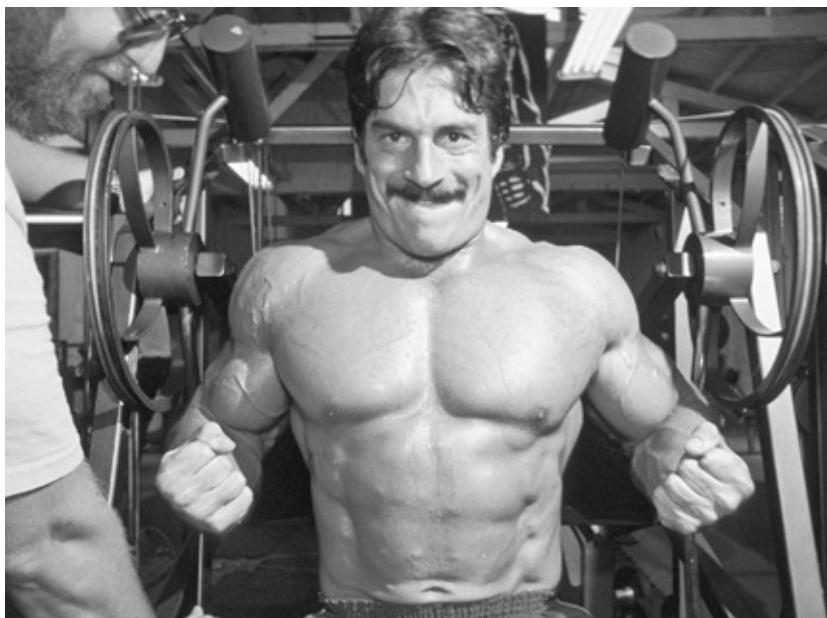
Beyond Rest-Pause

The question may now arise, "Where do we go after Rest-Pause training? How could you possibly train more intensely than that?" Mike Mentzer had an answer in the form of static holds and other advanced Heavy Duty training methods, which he called Infitonic training and Omni-Contraction training. As Mike's books *Heavy Duty II: Mind and Body* and *High-Intensity Training the Mike Mentzer Way* cover static holds, I will forgo a thorough discussion of static holds here and focus instead on the other advanced training techniques, which Mike used in his own training to build additional muscle mass.

INFITONIC TRAINING

Infitonic training is very similar to Rest-Pause in that each rep is also a maximum effort, with the added difference, however, that the negative aspect of each rep is also maximum. In other words, you do your regular Rest-Pause maximum repetition and then also lower the weight very slowly with a little bit of additional downward pressure being provided by your training partner. Let's hear from Mike on the nuances of this protocol:

In most cases, the weight that allowed for one maximum positive rep will be sufficient for the negative rep that follows. Where it is not, again, I would suggest that your partner provide additional downward resistance by pushing down on the weight while you fight it up. Your partner must be very careful, however, and not give so much downward pressure that you lose control and hurt yourself. He has to be very attuned to what you're doing, and if he's not, he might provide too much pressure and cause an injury. Keep in mind that the key to generating more and more effort is to make each muscular contraction as severe and as intense as possible.



Infitonic training can be performed using either free weights or machines. Here, Mike gets some additional negative pressure from a training partner (left) during an Infitonic set of Nautilus pullovers. (Courtesy of Weider Health and Fitness.)

OMNI-CONTRACTION TRAINING

In his last book, *High-Intensity Training the Mike Mentzer Way*, Mike pointed out the fact that the skeletal muscles each have three levels of strength:

1. Positive (or raising of the weight)
2. Static (or holding of the weight)
3. Negative (or lowering of the weight)

Each of these levels refers to a different type of contraction: concentric, static and eccentric contractions, respectively. The ultimate intensity method would be one that provided for maximum effort on each type of contraction on each and every rep. Hence, Mike's reason for naming this protocol Omni-Contraction or "all contractions." Here is how Mike described the performance of this highly advanced Heavy Duty technique:

After warm-up, choose a weight that allows for a maximum single, as in Rest-Pause training and Infitonic training, but this time, as you lower the weight in the negative aspect, stop the downward progression at three different points in the range of motion: one close to the top, not quite toward the midway point; then again at the middle; and once at a point near the bottom, not quite toward the extended position. Hold the weight in each one of these three different positions, attempt to reverse the downward motion, actually try and raise the weight again—which should be impossible—and hold each position for two to three seconds at the most. Perform just like Rest-Pause by resting ten seconds between each of the four or five reps of the set. You might also select three different static-hold positions for each repetition so that you work many more points in the entire range of motion statically. Follow the same basic guidelines as in Rest-Pause and Infitonic training.



In Omni-Contraction training, you perform a maximum single lift and as you lower the

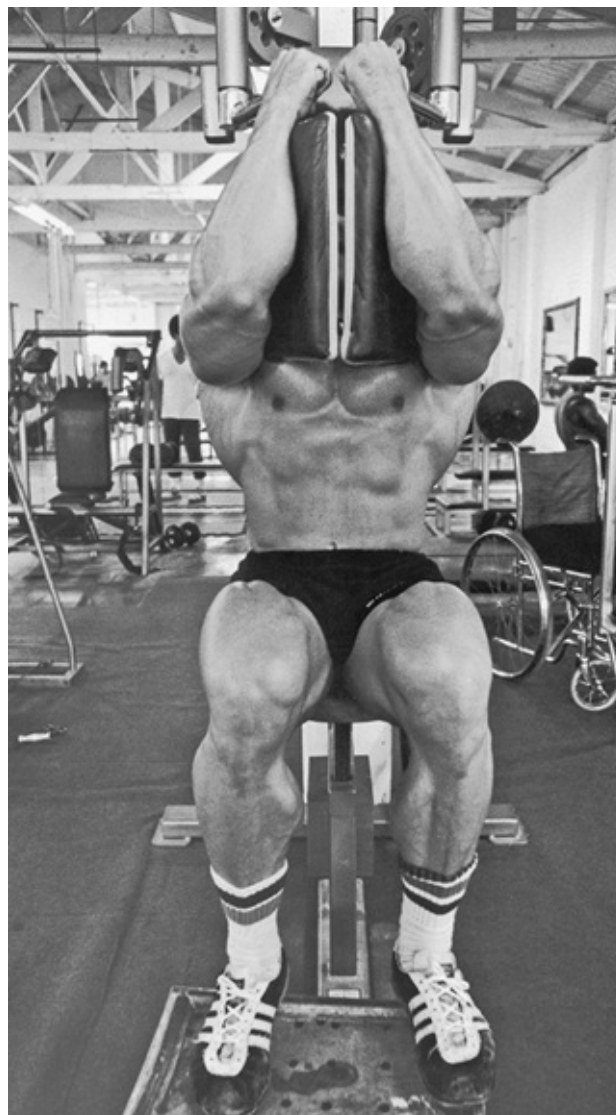
weight in the negative aspect, you attempt to stop the downward progression at three different points in the range of motion—one close to the top, another at the midpoint, and again at a point near the bottom, or stretched, position. It is important to have a training partner to ensure safety at all times. (Courtesy of Weider Health and Fitness.)

Again, as with Rest-Pause, you might also be innovative here and combine all three advanced methods—Rest-Pause, Infitonic, and Omni-Contraction training. Maybe do one set of each during each workout. Rest assured that as long as you keep to the basic tenets of Heavy Duty training, you can confidently form your own routine.

RESULTS

According to Mike, when he and his brother, Ray, employed these advanced Heavy Duty training techniques, their muscle mass gains skyrocketed:

My brother, Ray, and I utilized Rest-Pause, Infitonic, and Omni-Contraction last summer and fall before his Mr. America victory and my second-place finish in the Olympia. Since we both surprised everyone with our dramatic improvement, I'd say these new Heavy Duty methods might be worth a try. Remember, however, that as you climb higher and higher up the ladder of intensity, the duration must decrease. Limit the reps to no more than four since these methods are unbelievably brutal!



Exercises where static holds can be most effectively employed are isolation exercises such as the pec deck. (Courtesy of Weider Health and Fitness.)

STATIC HOLDS

During his years as a trainer (when his perfection of the theory of high-intensity training was fully realized), Mike became more and more intrigued by the technique of static holds, which resulted in substantial improvement in many of his personal training clients. During his own workouts when preparing for competition, Mike had always emphasized the fully contracted position of each exercise he performed, but until this point in time, he had never considered employing this position exclusively, without need of positive (or lifting) movements at all.

As this advanced technique is covered in some detail in Chapter 11 of *High-Intensity Training the Mike Mentzer Way*, I will refer you to [pages 97 to 100](#) of that title for more information, save for this statement from Mike on the performance of this advanced Heavy Duty protocol:

Exercises where this technique may be employed most successfully are isolation exercises, that is, those involving rotary movement around one joint axis and which provide resistance in the fully contracted position—for example, the pec deck, machine lateral raises, the leg extension and leg curl, and the calf raise. The one compound exercise on which I've used static holds with is the close-grip, palms-up pulldown. The best machines to use are Nautilus since they were designed to provide full-range variable resistance, with close to perfect resistance in the fully contracted position. On most exercises where I have my training clients do fully contracted "holds," I select a weight that is sufficiently heavy so they can hold it in the fully contracted position for a maximum of approximately eight to twelve seconds for upper-body exercises and fifteen to thirty seconds on lower-body exercises; then they have to lower it under strict control.

In the beginning, I had my clients perform two holds with two negatives (lowerings), but now I have found they do better with one hold and negative. And at times, rather than have them perform the holds without the positives, I vary their workouts and have them perform a set to positive failure followed immediately by a hold to failure. And this works very well.

The proper progressive application of these advanced Heavy Duty training principles to your heavy-duty training program will allow you to grow stronger every single workout, without any breach in such progress, until you have reached the absolute upper limits of your genetic potential.

If you are an advanced bodybuilder who has not experienced much in the way of progress recently, you may wish to give these advanced Heavy Duty methods a try. They are not for the faint of heart, but they just might be the key to realizing your full muscular potential.



Advanced Heavy Duty training techniques such as Rest-Pause, Infitonic, Omni-Contraction, and Static Holds might be the key to realizing your full muscular potential. (Courtesy of Weider Health and Fitness.)

Part III

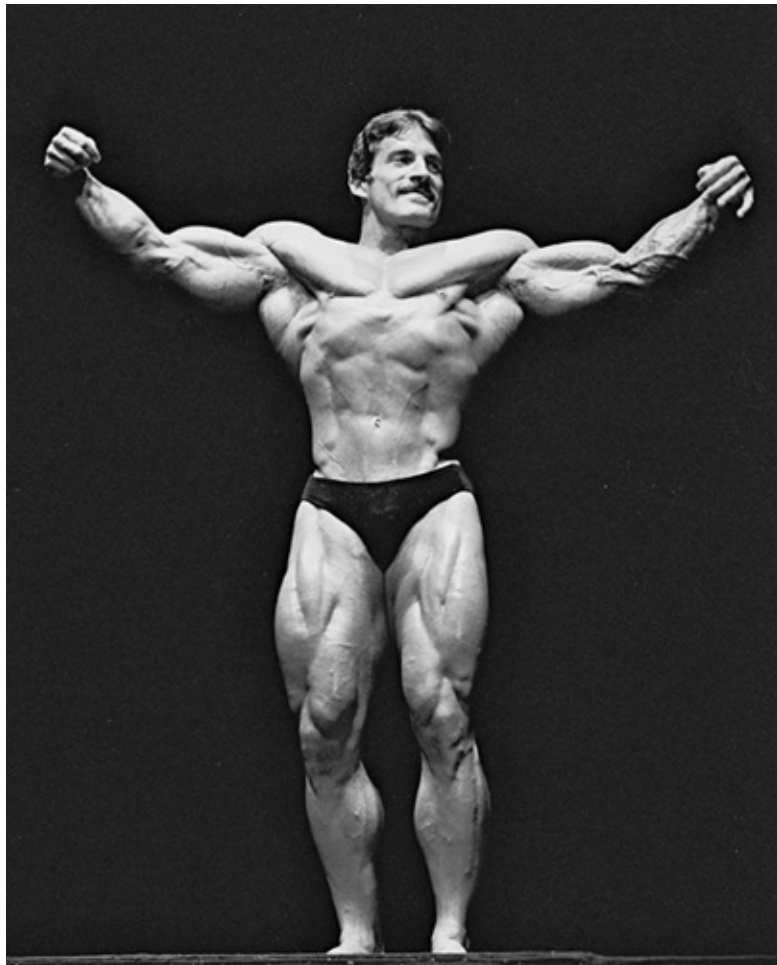
HISTORY



Preparing for the 1977 World Championships: Kal Skalak (left), Danny Padilla (second from right), and Mike Mentzer (far right) are congratulated by legendary bodybuilding publisher Joe Weider, the man who brought Mike to California and introduced him to bodybuilding fans the world over through the pages of his magazines. (Courtesy of Weider Health and Fitness.)

Chapter 6

MIKE MENTZER'S MOST PRODUCTIVE ROUTINE



Mike Mentzer displaying the awesome size, chiseled proportions, and razor-sharp definition that saw him win the heavyweight division of the Mr. Olympia contest in 1979. (Courtesy of Chris Lund.)

The most important thing, I think, is motivation—everyone can improve themselves—and that's important. Not everyone is going to become Mr. Olympia, but we can all improve ourselves.

–Mike Mentzer

The foregoing chapters have indicated some of the intellectual and scientific achievements Mike accomplished during his lifetime, and thus they represent the core of his legacy. But many of his fans continue to have questions about what he did during his competitive days while still in the early stages of his journey toward the perfection of the theory of high-intensity training.

Given how imposing Mike's physical appearance was, it surprises many to learn that he was under six feet in height. In fact, he stood but five feet, eight inches, yet packed 225 pounds of rock-solid muscle on his frame.

THE ROLE OF GENETICS

Without question, genetics played a huge role in providing Mike the foundation for building muscular mass—as he was the first to admit. However, in later years, he confided that he had reservations about perhaps having made the case for genetics too strongly. While genetics were important, Mike believed they had been overemphasized. He worried that the notion of a person having to have good genetics to achieve a championship physique had actually served to demotivate certain bodybuilders. “Besides,” Mike explained, “it’s very difficult to accurately assess your genetic potential; at best you might be able to get a *suggestion* of where you might go based on your muscle belly lengths, bone structure, metabolism, and neuromuscular efficiency, but the most important thing, I think, is motivation—everyone can improve themselves—and that’s important. Not everyone is going to become Mr. Olympia, but we can all improve ourselves.”

In 1986, I was living in Canada and was busy searching for answers concerning the “ultimate truth” of bodybuilding. I set out to interview those who, in my estimation, had tried to decipher this Rosetta stone themselves. I interviewed Lou Ferrigno, John Grimek, Paul Anderson, Doug Hepburn, Frank Zane, Lee Haney, Dorian Yates, Lee Labrada, Steve Reeves, and both Mike and Ray Mentzer, among others, during this period of my search. It was, in fact, during a trip to California to interview Steve Reeves that Mike invited me to stay with him as his guest at his apartment in Hollywood. I readily accepted, for I knew it would afford me an opportunity to talk about not only bodybuilding but also philosophy, a passion that both Mike and I shared for over two decades (some of these dialogues have been reproduced in the book *The Mike Mentzer Dialogues: Seminars & Dialogues with Mike Mentzer on Bodybuilding, Nutrition & Objectivist Philosophy* published by Mentzer-Sharkey Enterprises, Inc.).

During my stay, we talked about a great many subjects, but first and foremost in my mind was to find out what Mike Mentzer’s most productive training routine had been. I knew he had been all over the board in terms of sets and reps throughout his early career. He started out with a whole-body workout performed three days a week (in which he gained no less than seventy pounds over three years!), which brought his body weight up from 95 pounds at age twelve to 165 pounds at age fifteen. From there Mike moved on to the routines advocated in the various muscle magazines that espoused training for twenty sets per bodypart, even at one time extending this to forty sets per bodypart. This brought his body weight up again, but only slightly. When his gains eventually ground to a complete halt on these high-set routines, he happened to make the acquaintance of Casey Viator (then the youngest Mr. America to ever hold the title) and learned of the high-intensity training beliefs advocated by the Nautilus machine creator, Arthur Jones. After speaking with Jones directly, Mike decided to switch back to a whole-body, three-day-a-week routine, consisting of approximately five sets per bodypart (performed in high-intensity fashion). He won the Mr. America contest while training on such a program in 1976, at a body-weight of approximately 205 pounds. But he didn’t stay with this program; he eventually switched over to a split routine performed four days per week and then, prior to his Mr. Olympia appearances in 1979 and 1980 where he tipped the scales at a rock-solid 225 pounds, he spread his training days out even further so that he was training only once every two to four days.

I wasn’t interested so much in what his hypothesis might have been in the matter (it was not as advanced as it would become from 1998 through 2001, where he reduced the

sets to one to three on a split routine that saw his clients training but once every four to seven days). Rather, I was interested in learning what he actually *did*—that is, how he himself actually trained to build the incredible muscle mass he was legendary for and what, of all the routines he had ever employed, he personally had found to be the most productive muscle-building routine of his entire career. Mike was seated at his desk and I was directly across from him on a sofa in the living room area, when I first inquired about what routine he had followed when he made the *best* gains of his life. Mike smiled, being the bodybuilder at heart that he was and knowing this was the question all aspiring bodybuilders wanted the answer to. Indeed, he himself had posed the very question to his idols such as the great Bill Pearl, when he was starting out in bodybuilding.

He began,

The routine that I followed was the essential basic Heavy Duty routine, consisting of four to five sets per bodypart and broken into two workouts. The first workout would be legs, chest, and triceps; the second workout being back, shoulders, and biceps. I would start with leg extensions—six to eight reps to failure—and then continue beyond that with forced reps and negative reps, and then go immediately to leg presses, preferably on a Nautilus compound leg machine, as that would allow me to go from one exercise to the other without pausing. After that, I would do one set of squats to positive failure, usually in the neighborhood of 400 to 500 pounds and then proceed on to leg curls for two sets, and then I'd work calves—typically two sets of standing calf raises on a machine, followed by one set of toe presses on a leg press machine to failure.



Heavy dumbbell flies used in preexhaustion fashion with incline presses were used to good effect by Mike Mentzer during all of his Heavy Duty workouts throughout the 1970s. (Courtesy of Weider Health and Fitness.)

After legs, I'd move on to chest for one to two supersets of dumbbell flies or pec deck with incline barbell presses. I'd follow this up with one or two sets of dips. I'd always select weights for my exercises that allowed me to get at least six good positive repetitions and then continue with forced and negative reps. With any preexhaust set, such as leg extensions to leg presses or pec deck to incline press, I would take no rest at all between exercises, but I would rest long enough to catch my breath, and I'd only do the negatives once a week on each exercise.

Moving on to triceps, I'd limit myself to under four sets for triceps, doing one

preexhaust cycle of triceps pressdowns followed immediately by a set of dips. Then I might finish off with two sets of lying triceps extensions. That would be it for my first workout.

Workout One (Monday)		
Leg Exercises	Sets	Reps
Leg extensions and leg presses	{ 1 superset }	6–8
Squats	1	6–8
Leg curls	2	6–8
Calf raises	2	6–8
Toe presses	1	6–8
Chest Exercises		
Dumbbell flyes or pec deck	{ 1–2 supersets }	6–8
Incline presses	1	6–8
Dips	2	6–8
Triceps Exercises		
Triceps pushdowns	{ 1 superset }	6–8
Dips	1	6–8
Lying triceps extensions	2	6–8

Workout Two (Wednesday)

Back Exercises	Sets	Reps
Nautilus pullovers	{ 2 supersets }	6–8
Close-grip pulldowns	1	6–8
Bent over barbell rows	2	6–8

Traps Exercises

Universal machine shrugs	{ 2 supersets }	6–8
Upright rows	1	6–8

Shoulder Exercises

Nautilus laterals	{ 2 supersets }	6–8
Nautilus presses	1	6–8
Rear delt rows	2	6–8

Biceps Exercises

Standing barbell curls	1	6–8
Concentration curls	2	6–8

“What about your second workout of the week?” I inquired. Mike’s forearms rippled as he carefully placed a pen on his desk and answered,

Well, moving on to my second workout, which would be back, shoulders, and biceps, I would begin with the largest muscle group—the back—and perform Nautilus pullovers supersetted with close-grip, underhand pulldowns. I’d complete two cycles of these two exercises, then move on to two sets of bent over barbell rows to finish up my lat work. From there, I would move on to traps and perform two preexhaust cycles of Universal machine shrugs supersetted with upright rows. From there, it would be on to the shoulders, where I would do two superset cycles of Nautilus lateral raises, followed by Nautilus presses behind neck, and follow up with two sets of either rear delt rows (performed by sitting backward in a pec deck machine and squeezing the elbows as far back as they can go) or two sets of bent over dumbbell laterals. And finally, I’d finish up with the biceps, where I’d do one set of standing barbell curls to failure, followed by one or two sets of either seated concentration curls or preacher curls.



Nautilus machines were always Mike Mentzer's first choice when it came to bodybuilding equipment. Here Mike prepares to hit it hard on a vintage Nautilus pullover machine during his training leading up to the 1978 Mr. Universe contest. (Photo by Peter Brenner, courtesy of Weider Health and Fitness.)

"Was there anything else you did differently with this routine?" I asked eagerly.

"Yes, John, there was," Mike replied,

I utilized this type of routine throughout my professional bodybuilding career, but the greatest gains I got from it were when, rather than being followed on the usual four-out-of-seven-days schedule, I began spacing it so I trained every other day on a split routine. For instance, rather than train Monday and Tuesday on a split routine, where on Monday you do half the body and on Tuesday the other half, I would do the first half of the body on Monday, skip Tuesday to recuperate and allow the overall system to recover and grow, and then train on Wednesday, rest on Thursday, and repeating the cycle for the other half, I would train Friday, rest Saturday, and then train Sunday again. That was the most result-producing routine that I ever used.

I asked Mike why he thought that such a split routine was more productive than the whole-body, three-day-a-week routine that had carried him through to victory in the Mr. America contest, to which Mike replied,

Well, it was back in 1979, I remember meeting my brother in the gym for one of our usual workouts. I think it was the second day of a split routine schedule and we were both quite fatigued, apparently still not having recovered from the previous day's workout. Just all of a sudden it occurred to me that it would be useless to train with anything less than all-out intensity, since that was required to induce maximum growth stimulation, and if in fact I had not recovered—it was obvious to myself and my brother that we had not recovered as we were both extremely tired—then why train at all? Recovery always precedes growth, and growth was our ultimate goal; if we had not recovered, then there was no way we could have grown from the first workout. In that kind of a case, the best thing that can happen would be that you merely wouldn't make any progress, you'd just spin your wheels. But carried on for too long, you'll actually lose muscular mass and strength—you'll always be making inroads into your recovery ability and never allow yourself to recover, let alone grow, which is secondary. You have to recover before you can grow. So, again, since Ray and I apparently hadn't even recovered, we knew we hadn't grown—so

why work out again? We had to recover first.

And there were times, John, when we skipped even two days in between workouts—seventy-two hours—we would train on a Monday, then skip Tuesday, skip Wednesday, and then train Thursday. We’d meet again on Wednesday morning or discuss it Tuesday night, and it was obvious that we were still tired, that the forced reps and negatives we had done on Monday with the legs and the back, for instance, were so exhausting that we hadn’t overcome the exhaustive effects of the workout. How the hell were we going to grow unless we at least let that happen? We knew that recovery was important in terms of overall, or systemic, recovery. We weren’t worried about localized or particular muscle recovery, we knew that happened relatively quickly after a workout. But it was obvious due to our general exhaustion that we hadn’t even recovered our overall systems’ energies and so forth—let alone grown. Since growth was our primary goal along with getting defined, we realized that it would have been counterproductive at that point—perhaps even harmful—to our progress to have trained before we allowed recovery and growth to take place.

We found sometimes we even needed two days off in between workouts, so we started doing a split of four days out of every nine or ten days—not allowing tradition and convenience, and compulsion at some points, to supersede logic and reason.

“That’s good,” I commented, “and also you made probably the best progress of your life when you did that.” Mike replied,

“Yes,” we did make the best. We had hit a plateau there for a while; our gains had slowed down as is often the case with advanced bodybuilders. But when we adopted that program, our gains skyrocketed again—even for advanced bodybuilders! At one point there, I had gained ten pounds of muscle in three weeks and lost four pounds of fat at the same time.

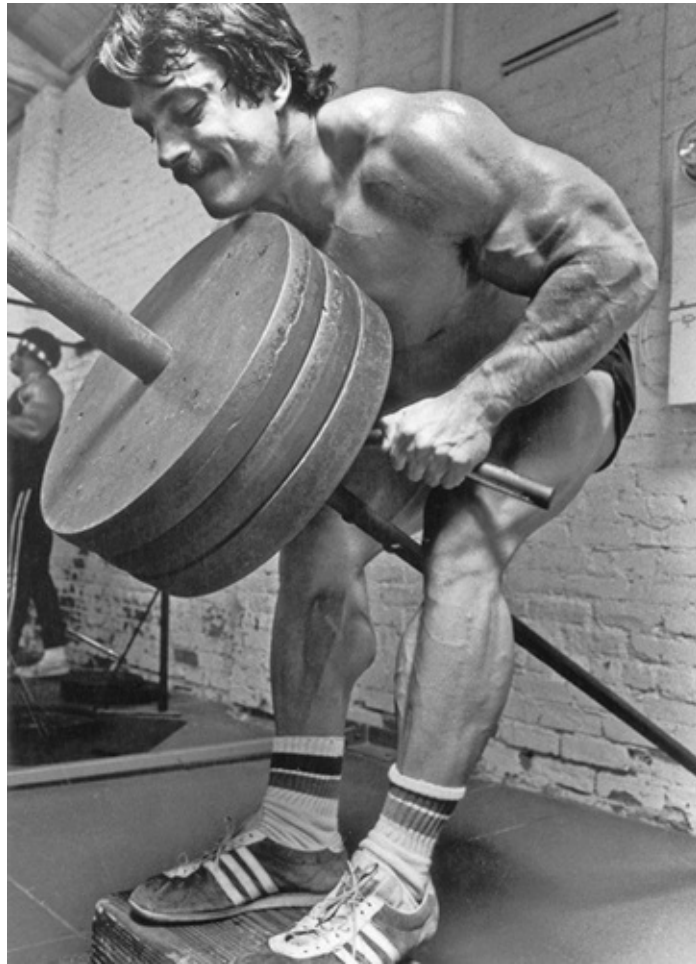
It struck me that Mike had been the only high-intensity advocate who actually broke with Arthur Jones on the point of employing a split routine. Everyone who trained under Jones’s watchful tutelage was made to train their whole body each and every workout, the reasoning being that the body is an interconnected unit and should be treated as such when exercising it (and there is much merit in this approach). Jones used to say that one didn’t rest each bodypart on different days, so why would one train them on different days? The body needed time to recover—as a whole—not just the specific bodypart being trained. Mike, however, broke with this line of reasoning as a result of personal experience. As he related it,



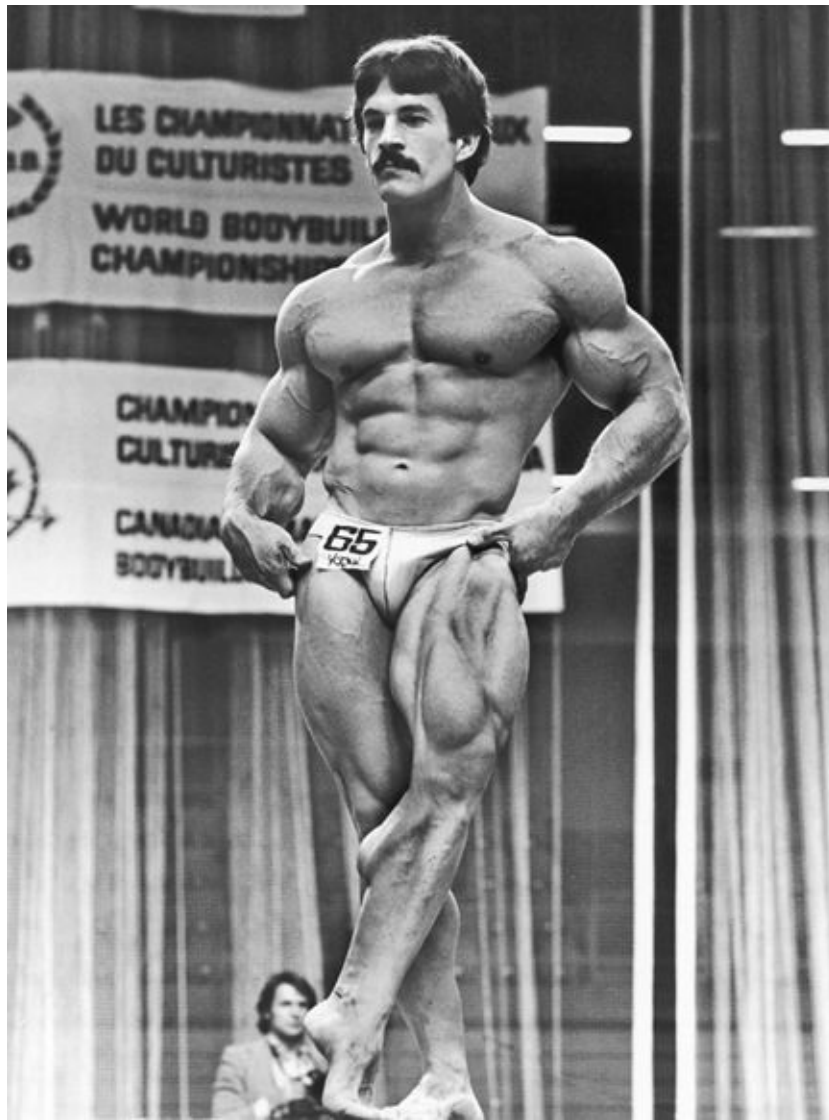
Mike (left) and Ray (right) Mentzer made the best progress of their careers when they started to add additional rest days in between workouts. According to Mike, the Mentzer brothers did “not allow tradition, convenience, and compulsion, at some points, to supersede logic and reason.” (Courtesy of Weider Health and Fitness.)

I was training on that kind of routine, that is, the full body, three-day-a-week routine—the “non-split” routine—on Monday, Wednesday, and Friday when I was at college. And with that kind of training coupled with a full college schedule, a part-time job with a physician, and the demands of an ongoing relationship with a nice young lady, I found that I just didn’t have the energy. That three-day-a-week program left me so exhausted that when I did a full-body program on a Monday, I was so shot after the workout that all I could do was go home and sleep for a while.

I asked him if he thought that the problem might have been more effectively remedied by simply taking protracted recovery periods in between workouts, to which Mike replied, *No, it was the immediate response, the immediate fatigue. It wasn’t the long-term recovery that was required. It was just too much all at once. With all the other demands I had in my life at that time, I was really forced to do something about it. I knew that high-intensity training was the best, there was no question about that, but I couldn’t put up with that kind of exhaustive effect immediately after the workout; I had to either go to a job or back to school, and all I could do was collapse in a heap and sleep. Really, the buildup of lactic acid was so quick, so dramatic, and so severe that until my body metabolized it—usually about two hours later—I was almost incapacitated. I found that by splitting the routine, doing half the body one day, the fatigue was even less than half—it was much less than half. You would think it would only be half, but apparently after a certain point, in terms of volume in training, the exhaustive effects grow geometrically as opposed to arithmetically. I found that I could get the same benefits from the high-intensity training while avoiding the overwhelming exhaustive effects of the three-day-a-week routine.*



Mike Mentzer discovered that a split routine allowed him to train each body part with ultra-high intensity while avoiding the exhaustive effects of the three-day-a-week, whole-body routines advocated by Arthur Jones and Nautilus Sports/Medical Industries during the 1970s. Here Mike blasts his lats with a set of T-bar rows during one of his legendary Heavy Duty workouts at Gold's Gym in Venice, California. (Courtesy of Weider Health and Fitness.)



“Don’t train so frequently that you exceed your body’s ability to overcome the exhaustive effects of exercise.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

I asked him if perhaps utter exhaustion—such as that experienced on the whole-body, three-day-a-week routine—was truly a requisite for growth stimulation, bearing in mind Jones’s old adage that unless you were “made nauseous from a set of barbell curls, you don’t know what hard training is.” Mike thought for a moment, raised his arm up to scratch his opposite shoulder, and then replied,

No, perhaps not. And perhaps if one’s schedule permitted one to experience that kind of two-hour, incapacitating, exhaustive effect, one might want to do it. I suggest that anybody who is not familiar with high intensity now but is tempted by it and wants to try it, they might start out with that three-day-a-week routine. If they find it’s too exhausting, try the four-day.

Finally, I asked Mike to summarize his experience for the benefit of all those bodybuilders looking to build mass. Here is his reply:

The formula is brief training, intense training, infrequent training. Young bodybuilders reading this should be cautioned against doing too many sets on too many days for all bodyparts. Their enthusiasm is often a hindrance; they’re so willing and able to train marathon-style to acquire a muscular physique that they often overtrain. I train at Gold’s, when I do train, and I see this as probably the most pervasive mistake of all bodybuilders,

including advanced bodybuilders. I would just suggest that no matter what methods you use, you don't do more than four to six sets per bodypart, use very good form—strict form—train to failure, use forced reps occasionally, and don't overtrain. That is, don't train so frequently that you exceed your body's ability to overcome the exhaustive effects of exercise and make sure that you have enough recovery ability left over for growth.

As always, Mike's words made perfect sense. And as I stared in disbelief at the massive shoulders and arms he was sporting that day while seated at the desk across the room from me, I had empirical proof of the efficiency of his most productive routine.

Chapter 7

THE FACTS OF LIFE AND THE 14½-INCH ARM



Mike Mentzer's arms were truly awesome to view up close after he had pumped them up with an intense workout for his biceps and triceps. (Courtesy of Weider Health and Fitness.)

I am extremely proud to say that one of my best friends, for the past twenty-two years, wrote this article. I first met John Little at Eaton's department store in Toronto where Arnold, Franco, and I had made an appearance for Weider and the IFBB, in 1979. We hit it off immediately, as John was philosophically oriented, along with having a passionate interest in bodybuilding.

—Mike Mentzer

Mike wrote the preceding words as a preface to an article I wrote for his website a mere three weeks prior to his passing. When Mike posted it, I remember feeling warmed by the memory of our first meeting and surprised that Mike had remembered that day so vividly.

The event was actually a breakfast seminar, and every muscle head in Toronto turned out to see the three greatest bodybuilders in the world hold forth on training. Franco Columbu was considered one of the strongest bodybuilders alive, and, indeed, his presentation that day served to underscore this point as he opened his talk by bending the microphone stand in half! Arnold, of course, was Arnold—he was then the greatest bodybuilder in history by virtue of his having won six consecutive Mr. Olympia titles and had received more ink in the muscle magazines than any other bodybuilder. Apart from the novelty of Franco's strongman stunt and Arnold's reputation and celebrity status,

nothing much was imparted of value to those in attendance. Franco indicated that people were paying too much attention to their biceps and not enough to their triceps, Arnold tossed out some anecdotes about training in California, and told everyone “not to be so intense” with their training and that in essence, everything worked and nothing worked.

But then came Mentzer. Although attired in a sports jacket and slacks, his chest, shoulders, and arms could not be concealed. And when he spoke, it was with the air of authority typically reserved for medical doctors and Ph.D.s. Moreover, after the seminar, Arnold and Franco quickly exited the building, whereas Mike stayed to converse with the fans. This impressed me, as many had traveled a great distance to witness this event, and Mike seemed to understand this and was more than willing to spend time answering questions and signing autographs. We spoke, together with our mutual friend, bodybuilding photographer Chris Lund, for the better part of an hour after the event.



The legendary Mentzer arm strains the sleeve of his extra-large Heavy Duty T-shirt as he prepares to perform a set of shrugs on the Nautilus neck and shoulder machine during a seminar in 1981. (Courtesy of Chris Lund.)

It dawned on me during Mike’s presentation that the majority of bodybuilders in attendance that day were neophytes struggling to break the 14½-inch-arm barrier. However, as Jack Neary once joked, “When Mentzer had 14½-inch arms, he was only three years old and he probably didn’t do much of anything for them anyway.”

When I once asked Mike what his arms measured taped at their largest, his answer startled me, “About 18½ inches.” I was incredulous. “But they look well over 20 inches,” I exclaimed. “Pumped, they probably are, John,” he replied, “but measured cold—which is how you should measure your arms—they never stretched the tape beyond 18½.”

Upon hearing this, I quickly realized how much deceit was being openly practiced in the bodybuilding world. Champions whose arms were obviously far less substantial than Mike’s would loudly proclaim measurements of 21 inches or in some instances that stretched credibility to the breaking point, “22 inches.” The fact that bodybuilders would make such claims is proof of the status that big arms command in the bodybuilding subculture. Indeed, most youngsters (and not a few of us oldsters) first became interested in bodybuilding when they saw how incredible a well-developed pair of arms looked—and Mike’s were downright freakish! I well recall a shot ace photographer John Balik took of Mentzer circa 1977, which was taken of Mike from behind and revealed triceps that

looked like two large watermelons tapering into his super-thick shoulder caps! Incredible arms—and what one would have given to sport a pair of guns like Mike Mentzer's! However, at the seminar that day, those who had no real desire to be competitive bodybuilders were hungry for information on how Mike built those outrageous guns. As soon as the question-and-answer period started, so did the questions!

“Well I certainly didn't train them like I do now,” he had replied to one questioner,

In my first years of training, I trained pretty well like everybody else did—six days a week for about two hours a workout, only two or three bodyparts per session. But my greatest breakthrough came in the last couple of years when I began training with shorter workouts and greater intensity. Let's face it, when you have 14½-inch arms, just about any form of hard work, alternated with lots of rest, will make them grow. However, I can say now that if I had been using my present routine then, I would have had 20-inch arms much sooner.

Like most beginners, Mike experimented with the barbell and dumbbell routines published in the muscle magazines. As he put it,

It took me quite a while to find out that the exercise isn't the most important factor, it is the intensity you apply to the exercise and the rest period you allow yourself afterward. Like any kid, I was doing way too many sets, far too often, and thus going past the point of constructive effort.

“How big are your arms?” came one question. Mike paused and then smiled and answered wryly, “Very big,” which caused all in attendance to laugh at the obviousness of his answer.

“How many sets and reps do you do?” came the next query.

I typically do less sets for my arms; for biceps about two to four sets and for triceps about two to four sets also. In terms of repetitions, I choose a weight that allows me about six repetitions. And then, of course, I continue beyond that with forced reps and negative repetitions, Heavy Duty style—nothing elaborate or exotic, just very, very hard work. You know, all the academic stuff aside—people like to read about the “science of bodybuilding”—it all boils down simply to very, very hard work. And the harder the work you do, the less work you're capable of doing. It's not even a debatable point; you can train hard or you can train long, but you can't do both. And it just so happens that it takes hard training to build big muscles.

“So what's been your most productive arm routine?” another attendee queried. Mike replied,

It's nothing special, results are usually linked primarily to motivation and your willingness to apply yourself 100 percent. My favorite arm exercises are Scott curls, Nautilus curls, and concentration curls for biceps. My favorite exercises for triceps are pressdowns, Nautilus extensions, and dips. Actually I think dips are the best triceps exercise. It's also the best overall upper-body exercise—I call it “the upper-body squat.” It's a very good exercise.

At this point in his career, Mike trained almost exclusively with supersets. That is, two exercises alternated in rapid succession. There is virtually no pause between the first and

second exercises, with a brief rest when the cycle is completed. He advised,



The seated dumbbell concentration curl was one of Mike Mentzer's favorite biceps exercises. (Photo by Jack Neary, courtesy of Weider Health and Fitness.)

For any muscle group, an isolation exercise should be performed first, followed by a compound exercise. For instance, my thigh routine involves a set of leg extensions (isolation) and squats (compound). As little rest as possible should be taken throughout the workout, the idea being to set personal time and weight records with eight to twelve repetitions. Every exercise is done to the point of muscular failure—that is, until no movement occurs in spite of maximum effort.

By way of proof, Mike indicated that when training for his Mr. Universe victory (which he won with the only perfect score in the history of the competition) he performed only one exercise each for the biceps and triceps (concentration curls and French presses), but he suggested that the 14½-inch-arm folks superset with an isolation and compound movement.



Preacher curls (pictured here) supersetted with heavy barbell curls were another Mentzer favorite when he was training for bigger arms. (Courtesy of Weider Health and Fitness.)

If you want to blast your arms into maximum growth, then you should be training them twice a week. Superset preacher curls with heavy barbell curls. Don't exceed three supersets—anything after that is overtraining. But unless you put high intensity into each set, you won't reap the benefits.

For triceps you should be doing pressdowns on the lat machine supersetted with dips. Here again you have the isolation and compound movements.

Mike was always a strong advocate of doing a warm-up set before hitting the heavy weight. In any exercise, the most dangerous rep is the first because the power output is the greatest. The tendons are subjected to tremendous tension; therefore, it is always best to warm up.

Too many guys train long, but they don't train hard. It is that short, highly concentrated effort that stimulates growth, not marathon sessions of twenty sets per bodypart. And you definitely want to get lots of rest between workouts!

The preacher curl is great for developing the lower biceps, which creates a high peak in the flexed position. Be sure to extend the arms all the way out. By the end of the set [about ten reps], you shouldn't be able to move the bar. This is your isolation movement. Immediately afterward, go into a set of heavy barbell curls, the compound movement. Do not be afraid to cheat it up. Rest about thirty seconds, then hit it again. All you really need is two of these supersets.

The same principle applies in triceps training—do not neglect triceps for the sake of biceps as many guys do. Triceps make up the greater bulk of the upper arm. They are my strong point.

When in training for the Mr. America contest in 1976, Mike applied these same principles to all the bodyparts and trained his entire body in one workout, three times a week. He would, of course, later modify this program when training thousands of personal clients, switching to a split routine in which the body was divided up into three workouts (i.e., chest and back, legs, and shoulders and arms), with one workout performed every four to seven days. Later he advocated the consolidation routine indicated elsewhere in this book. However, while his refinement of the Heavy Duty training system became greater over the next twenty years, the fundamental principles of intensity, duration, and frequency would remain unaltered because, as Mike pointed out, “they are facts, which aren't subject to debate.” He explained,



Mike Mentzer blasts his triceps with a set of triceps pressdowns, an exercise that he not only used in his own training but also highly recommended to his personal training clients over the years to come. (Courtesy of Weider Health and Fitness.)

There are two kinds of training. There is hard training and long training. I train hard and fast. I will superset exercises and do each set to failure. By the last rep, the weight cannot move no matter how much force is exerted. When you train like this, all you need is four sets, twice a week. If more guys followed this type of training, bodybuilding would be revolutionized.



“Do not neglect triceps for the sake of biceps as many guys do. Triceps make up the greater bulk of the upper arm. They are my strong point.”—Mike Mentzer (Photo by

Caruso, courtesy of Weider Health and Fitness.)

Of course, more people did follow this type of training—and bodybuilding was revolutionized.

Chapter 8

ONE SET

MIKE MENTZER AND DORIAN YATES'S OLYMPIAN WORKOUTS



(Photo courtesy of Northern River Productions Inc.)

Dorian called me the next day and said, ‘You won’t believe this, but my arms are *bigger* this morning than they were yesterday!’ Then it hit him again, and he said, “I’ve *grown* from only one workout! I’ve grown from only *one* set!

–Mike Mentzer

How many sets should a bodybuilder perform when the goal is to build maximum muscle mass? A quick look at the history of this sport shows that massive muscles have resulted from all sorts of training protocols: the legendary John Grimek made great gains training with three to six sets per bodypart, Steve Reeves made his best gains training with nine sets per bodypart, Bill Pearl trained with up to thirty sets per bodypart, Arnold Schwarzenegger was a twenty-sets-per-body-part man—and so was Frank Zane—while Lee Haney made his best gains on roughly twelve sets per bodypart.

In reviewing the preceding figures, one would conclude that multiple sets are the key to massive muscles—which is precisely what most bodybuilders (and bodybuilding writers) have concluded. This paradigm was successfully challenged, however, in 1992 when Mike Mentzer successfully tested a one-set-per-exercise protocol that resulted in Dorian Yates winning the Mr. Olympia title.

For many months prior to their getting together, Mike had theorized that one set to

failure was sufficient to stimulate maximum gains in muscle mass. Being largely traditionalists the bodybuilding community looked down their nose at Mike and his proposition of one set to failure. Although Ellington Darden, Ph.D., had advanced this same notion (which he had learned from Nautilus pioneer Arthur Jones) in several bodybuilding books throughout the 1980s, Darden's publications, while enjoying solid sales among Nautilus aficionados, caused nary a ripple on the waters of professional bodybuilding. Mike's proposition, however, was somewhat different than the good doctor's. Whereas Darden recommended workouts that were upward of twenty sets in length, Mike had refined the application to where his clients were performing no more than five to seven sets (total) in a split routine in which each workout covered two to three bodyparts—and never more than one set of each exercise was performed. Such, rumor had it, was the type of training that Yates was performing under Mike's watchful eye.

If true, this was incredible, for never before in the history of bodybuilding had a super-advanced bodybuilder (let alone a Mr. Olympia-caliber physique), in an attempt to gain *more* muscle mass, trained with a mere one-set-per-exercise protocol. In fact, in bodybuilding circles, this was like the resurrection of Christ—a miraculous occurrence that seemed to defy natural law! While the more liberal bodybuilders conceded that the theory of one set to failure could be seen as a practical approach for beginners, whose bodies were not accustomed to the rigors of advanced bodybuilding training, they were skeptical as to how such a protocol could yield any meaningful results to a seasoned bodybuilder. The conservative bodybuilders, having long since closed their minds to alternative modes of training, dismissed Mentzer's theory outright as an urban legend, a yarn propagated to test their gullibility.

As I was living in Canada at the time, I heard about the Yates-Mentzer get-together ex post facto. But enough bodybuilders in Gold's Gym had witnessed the event when it actually occurred, and not a few of them had begun talking about it. Gold's Gym being, as its moniker states, "the Mecca of bodybuilding," it wasn't long before word of the Mentzer-Yates experiment began to circulate through gyms around the world (when a barbell plate is dropped in Venice, it's heard in Cairo).

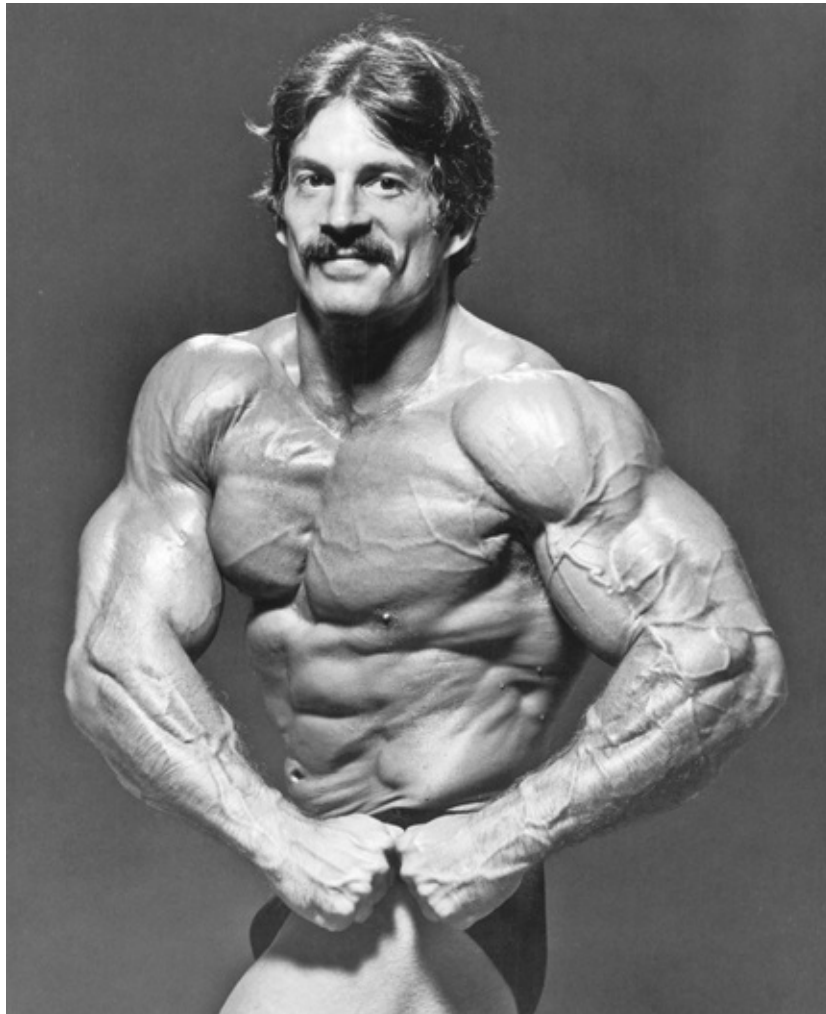
Not long after their get-together, I decided to call Mike and inquire about the rumor. Truth be told, I was highly intrigued, as any time two bodybuilding legends get together to train, it's newsworthy. Also, given that bodybuilding is a highly competitive arena, it seldom—if ever—happened that a leading bodybuilding luminary would publicly submit himself to the training methods of another, as it might seal off a potential avenue of revenue from one champion's training methods in favor of the other's. Finally, even though Yates at this point was just an *aspiring* Mr. Olympia competitor, the buzz already had him pegged as the man to watch.

I dialed Mike's number, and Mr. Heavy Duty picked up the phone. After some preliminary banter, I asked him about the workout he had put Dorian through and what his impressions were of the young lion. Mike related that they had met at Gold's Gym, Venice, where Mike conducted his personal training business. Yates, having been a fan of Mike's during the latter's competitive days, had approached him to talk training. "I'd noticed that Dorian had increased his sets and reps as of late," Mike recollected, "and, quite frankly, he hadn't made any progress." Yates evidently conceded that this was so,

and the two high-intensity advocates began comparing notes on their training experiences. Mike relayed his opinion that Yates was training too often and then offered the following suggestion: “I’ll put you through a biceps workout that consists of only one set—but that one set will do more for your biceps than all the rest of the exercises, sets, and reps that you’ve done for the past year.”

Yates, of course, was by no means an amateur in this matter. He had already built himself up to absolutely behemoth proportions, weighing a rock-solid 275 pounds during the off-season, and he had just come off a second-place finish at the 1991 Mr. Olympia. I mention this to correct a misperception that Mike’s guidance was directly responsible for all of the muscle that layered the Yates physique, a rumor that Mike had himself denied repeatedly to me over the years since their get-together. Yates was obviously no slouch in the bodybuilding department, but having been a fan of Mike’s for some time, he had nothing to lose by spending an hour or so with his former hero. Plus, he knew he wanted to progress more than his current training methods seemed to be allowing. He agreed that he would put his skepticism about “one set to failure” aside and would try out Mike’s radical training protocol. The two men then made their way to the back of Gold’s Gym, where the Nautilus multi-biceps machine was located.

Mike had Yates position himself in the machine and perform a brief warm-up set to get the blood flowing into the biceps, preparing them for the assault that was to follow. Under Mike’s supervision, Yates launched into his set of curls with a ferocity seldom witnessed in a commercial gymnasium. Anticipating Yates’s immense strength, Mike had placed the selector pin at the bottom of the weight stack on the multi-biceps machine, to ensure that Yates would hit failure under the eight-repetition mark. Yates performed each repetition in true Heavy Duty high-intensity fashion, taking three seconds to complete the concentric, or lifting, phase; pausing for one to two seconds in the fully contracted position; and then taking four seconds in the eccentric, or lowering, phase. This continued until Yates hit failure around seven repetitions, at which point Mike assisted Yates in performing two forced reps, each with some added negative pressure coming by way of Mike pushing down on the weight stack.



Mike Mentzer had been a hero of Dorian Yates while Dorian was growing up in England. Later Dorian would adapt the one-set-to-failure philosophy of Mentzer's to become the first-ever Mr. Olympia winner to train on an abbreviated high-intensity training program. (Courtesy of Weider Health and Fitness.)



In 1992, one set on the Nautilus multi-biceps machine taken to total failure was enough to make Dorian Yates a believer in Mike Mentzer's approach to bodybuilding. (Photo courtesy of Northern River Productions, Inc.)

Yates's biceps were screaming and swollen almost beyond recognition, but the set wasn't finished: Mike at this point pinned an additional twenty-five pounds to the weight stack, lifted the arm of the machine up to the top, and had Yates grab it and hold it in the

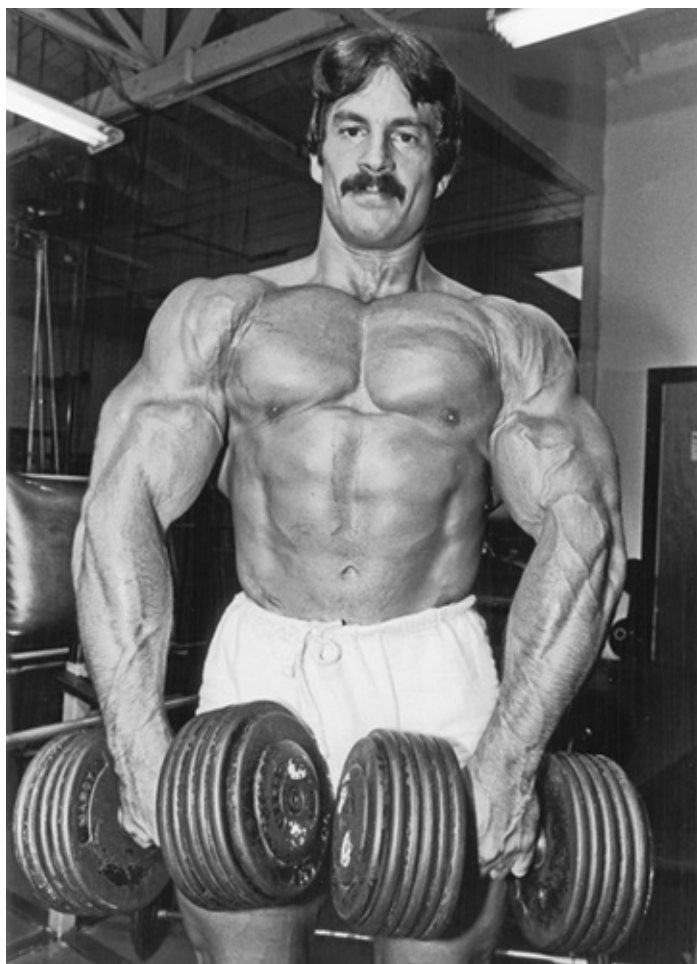
fully contracted position for fifteen seconds. As Mike called out the seconds, the weight stack began inching downward and the fibers in Yates's biceps grew more and more fatigued until finally they could no longer sustain the contraction. As soon as the weight stack was lowered, Yates let out a growl and immediately began massaging his biceps, trying to use friction to chase away the pain. After a brief break, Mike had Yates repeat the exercise for his opposite arm and the workout was done.

Mike recalled from this historic moment,

Dorian called me the next day and said, "You won't believe this, but my arms are bigger this morning than they were yesterday!" Then it hit him again, and he said, "I've grown from only one workout! I've grown from only one set! I want you to put me through a series of workouts just like that for the rest of my bodyparts so I can train this way when I go back to England!"

BACK TO THE GYM

The next day, Yates and Mike met again at Gold's, where Mike explained in greater detail the fundamentals of his new approach to training. I say "new" approach, because Mike had not always advocated one-set training; in fact, during his competitive days, he would typically perform four to five sets per bodypart—which was just as shocking in an era when most of the top champions were performing upward of twenty. Over time, Mike recognized that even two to four sets might be overkill. He once commented to me, "The one major training mistake I made was that despite having been the arch-advocate of lesser training, I was still overtraining, that is, training too long and too frequently."



Always learning, Mike Mentzer would later admit, “Despite having been the arch-advocate of lesser training, I was still overtraining [during his competitive career]—that is, training too long and too frequently.” He would later cut his workouts back to once every five to seven days, with each workout lasting between six and fifteen minutes. (Courtesy of Weider Health and Fitness.)

Mike had learned a lot about the science of exercise since his competitive days, and he had used Gold’s Gym as his laboratory to test his various hypotheses, with startling results. His clients were now training but once every four to seven days for about 12 minutes per workout, and none of his clients were using more than one set per exercise and no more than three exercises maximum per bodypart. He shared this with Yates and then outlined a similar program that would allow Yates to stimulate maximum muscle growth while allowing for ample recovery time. So doing, Mike believed, would better Yates’s chances at winning the 1992 Mr. Olympia contest, allowing him to come in bigger and more muscular. According to Mike,

I set up a program for Dorian that would have him training no more than three days per week. I don’t mean a three-on/one-off type of program, which is both unnecessary and actually counterproductive, but a workout regimen that would have him in the gym only three days per week: Monday, Wednesday, and Friday. I split the routine into chest, shoulders, and triceps on Monday; back and biceps on Wednesday; and legs by themselves on Friday. All other days were rest days.

MONDAY’S WORKOUT (CHEST, DELTS, AND TRICEPS)

Mike started Yates off on the program by training his chest, which consisted of one set of dumbbell flyes to failure, followed immediately by one set of incline barbell presses to failure. That was it for Yates’s chest—two sets (or roughly two minutes worth of direct chest work). Then they moved on to the shoulders, where Yates performed one set to failure on the Nautilus lateral raise machine, followed by one set to failure on the Nautilus rear deltoid machine—again, for a total of two sets lasting about one minute each.

For triceps, it was equally basic and brief: “Dorian told me that he was having some problems with his elbows,” said Mike, “so I had him forgo dips in his triceps training—an exercise I normally recommend. Instead, I had him do one set to failure of two different exercises: the Nautilus multi-triceps machine followed by cable pushdowns. That was it; he was finished for the day.”

Yates returned to the hotel he was staying at in Venice and prepared for his next workout forty-eight hours later.

WEDNESDAY’S WORKOUT (BACK AND BICEPS)

The Wednesday workout saw Mike and Yates getting together at noon. After a brief warm-up, Mike had Yates strap himself into the Nautilus pullover machine and again under Mike’s strict supervision, Yates performed fifteen repetitions with the entire weight stack! With no rest whatsoever, Yates was rushed over to the lat pulldown machine, which had been preloaded with three hundred pounds in anticipation of his arrival. Yates, perhaps the

strongest competitive bodybuilder of all time, proceeded to startle the assembled crowd at Gold's Gym (who prior to witnessing this Heavy Duty workout thought they had seen everything in the way of training) by performing seven reps with this poundage. After a very brief rest in which Yates barely had time to catch his breath, he was hustled off to the hammer strength row machine, where he unilaterally performed seven reps with 165 pounds. Mike recalled,

I remember the crowd was all around at this point, and what they were seeing was the real thing! This was not a fellow who would disappoint his fans by curling some twenty-five-pound dumbbells while covered in baby oil and spandex—this was a Heavy Duty bodybuilder in the purest sense of the term! Dorian put forth so much effort; this 275-pound monster was shaking from his head to his toes and grunting like a bear trying to make those last reps.

It's rumored that the whole gym stopped to watch Yates perform his next exercise: hammer strength machine shrugs—with a total of eight hundred pounds (all the weight the machine could accommodate). He would shrug that mammoth weight not once, not twice, but fourteen times—with Mike encouraging him on with each repetition. "I was telling him with each rep, 'This is for the Olympia, Dorian! This next rep is worth a million dollars to you!'" Mike recalled with a laugh. "This guy was a man *highly* motivated to succeed. He would have to be in order to have trained that intensely."

That one set of shrugs ended Yates's back training for the day, which consisted of three exercises for his lats performed for one set each (or roughly three minutes of direct training stimulation), followed by one set of shrugs. It was now time to revisit the Nautilus multi-biceps machine, the same exercise that had started this whole one-set series of workouts, where Mike had Yates again perform one set to failure. Mike picked up the story:

Dorian's biceps were so pumped they were cramping up, so I had him shake it off and then lift the weight up again and hold it in the fully contracted position for an additional fifteen seconds before lowering the resistance slowly back to the fully extended position. Normally, that would be all I'd have a client do for biceps, but I also put Dorian on a ninety-degree preacher bench to do one set of preachers—super strict! He went to failure on this one, too, with a weight of 150 pounds. And when he hit failure, I had him do three or four half reps and, to let you know how whipped his biceps were at this point, each half rep took him four seconds to complete! Needless to say, his biceps had had it for the day!



“Dorian’s biceps were so pumped they were cramping up, so I had him shake it off and then lift the weight up again and hold in the fully contracted position for an additional fifteen seconds before lowering the resistance slowly back to the fully extended position.”—Mike Mentzer (Photo courtesy of Northern River Productions, Inc.)

FRIDAY’S WORKOUT (LEGS)

Day four was a rest day, but Mike and Yates were back in the gym again that Friday to work Yates’s legs with another one-set Heavy Duty workout. Mike started him off with one set to failure—which came at rep number fifteen—on the Nautilus leg extension machine. With no rest and the seat cranked as far forward as it would go to ensure a greater range of motion, Yates then proceeded to blast the hell out of his thighs with another fifteen reps on the Nautilus compound leg press. “He was using the stack on this exercise,” Mike related, “and his quads were swollen up like balloons after he’d finished it.”

After a very brief rest, Yates walked over to the squat rack where he shouldered a barbell and performed seven ultra-strict reps with a whopping 540 pounds. “And this was *after* he had hit failure on both the leg extensions and the leg presses,” Mike recollected enthusiastically, “Dorian is phenomenally strong!” The routine continued with one set to failure of two exercises: leg curls and stiff-legged dead-lifts for the glutes and hamstrings, and then concluded with two sets of calf raises. Mike recalled,

Dorian was always keen to get back into the gym for his next workout, and when he returned home to England, he went back resolute that less is better in terms of training for muscle mass. He realized that he had gotten so big with high-intensity training before, and that to get even bigger, he had to increase the intensity of his training, which as we all know by now can only be done by decreasing the amount of sets you do in any given workout.

Mike then condensed the crux of his training system into two propositions:

Over the past two years, I’ve personally trained over two hundred people and I’ve discovered some very important things about building muscle mass. Success on this front boils down to two things—the issue of overtraining and knowing when to change routines. On the issue of overtraining, one set more than the least amount required to stimulate

growth is overtraining, that is, it is counterproductive—and the least amount required is, obviously, one set. There should never be an impasse to progress. My clients don't progress slowly, they don't have "stale periods"; they progress from workout to workout, just as Dorian Yates is doing.

Ironically, while Mike quite liked Dorian personally and obviously thought he had tremendous potential, Mike confided to me many years after the fact that at the time he was training Yates, he honestly didn't think that Yates would win the 1992 Mr. Olympia contest:

I didn't think he had the kind of physique they were looking for. That plus his association with me I thought would have caused some political problems. But then I hadn't taken into account that the contest was being held in Europe, and I know how the fans are over there about real muscle.

HISTORY IS MADE

The rest, as a popular saying would have it, is history: Yates would use the training principles Mike advocated, pack on even more muscle, and win the 1992 Mr. Olympia contest in a cakewalk. When word trickled back to Mike in the United States, he was happy—and again, surprised:

You know it's curious, because Dorian is kind of a low-key guy, he never said that much about our workouts to me. Even when he left here that many months ago, I talked to him until I was blue in the face—almost like I'm doing now—but he's the kind of guy who doesn't really respond much, you don't really know if it's clicking or not. Then the next thing I hear, the guy wins Mr. Olympia and he's telling all the interviewers that he did take my advice and he did cut back to one set per exercise and it really did work. I was delighted. I honestly didn't think that he would win the contest.

BACK IN GOLD'S GYM

Undeniably Mike also was pleased to have his unique approach to bodybuilding training taken up by no less a luminary than the reigning Mr. Olympia. Conversely, it seemed obvious to me that Yates was just as impressed with Mike's methods, for when I went into Gold's Gym a year after their famous get-together, I found Yates hard at work training his chest and biceps, once again under Mike's supervision. I watched the pair closely, wanting to see for myself what kind of intensity a bona fide Mr. Olympia winner was capable of generating and fortuitously, I happened to have my camera with me.

I noted that one set to failure was employed, but with something that made me smile: partial repetitions and static holds performed at the end of Dorian's regular sets. Yates's strength had obviously skyrocketed, as now no less than three spotters (including Mike) were required to assist in lifting the incredibly heavy weights that he was using into the fully contracted position of the exercise for him to hold statically. Yates not only used the entire weight stack on the incline press machine, but also four additional forty-five-pound plates.

The protocol I observed that day had Yates perform a very heavy set to failure and

then hold the resistance in a position of full contraction. Yates gritted his teeth and summoned all the energy he could muster to keep that weight from coming down; his forearms bulged as he gripped the handles of the machine and his pecs looked like they were about to explode through his sweatshirt! When the weight finally came down, Mike quickly reduced the poundage and lifted the movement arm of the machine so that Yates could again hold the weight in the fully contracted position. Sweat was now pouring freely down Dorian's face, and his arms shook until he could no longer contract against the resistance, at which point he lowered the weight (rather quickly) and massaged his now swollen chest. "Nice job!" Mike said, as he slapped Yates on the back, "Now let's hit the biceps!"

Mike then proceeded to put Yates through one set for the biceps, again finishing with static holds in the fully contracted position of the exercise. At the conclusion of the workout, Yates's biceps were quivering but pumped at least an inch and a half—and he seemed quite pleased as a result. "Mike and John," he beckoned to us, "I want to show you something." Yates gestured for us to accompany him into the posing room at the back of Gold's. Mike and I followed him, me with camera in hand to shoot the effect of the workout he had just completed. Yates stripped off his sweats and hit several poses under the watchful eye of Mike, who just stood there with his arms folded over his chest, smiling.

The muscle Yates put on display in the back room that day was nothing short of mind-blowing. "There's the 1993 Mr. Olympia, right there!" Mike said prophetically. It was obvious to all three of us that if this was the type of progress he was making, he could go on winning the Mr. Olympia title for as long as he wanted to.

Make no mistake, it was Yates who did the work and Yates who deserved all the credit for his Mr. Olympia victories. After all, when he returned to England, which is where his real contest preparation took place, he was his own trainer. But for the record, it was Mike's approach that Yates employed to stimulate his muscles into such incredible growth. He may well have won the Mr. Olympia had he trained without Mike's Heavy Duty training method; all we know is that he chose to do otherwise and the results of his decision are now a matter of record in the annals of the Mr. Olympia contest.

I should mention that Mike further refined and evolved the Heavy Duty workout protocol that he prescribed for Dorian Yates by reducing the sets and spacing the workouts further apart. However, in 1992, this program worked like a charm for the majority of those whom Mike trained on it. It should not, however, be taken as representing his final word on the Heavy Duty high-intensity training protocol.



You may be only one set away from the greatest gains of your bodybuilding career. (Photo courtesy of Northern River Productions, Inc.)

Will one set to failure work for you? That question can only be answered in retrospect. You may only be one set away from the greatest muscular gains of your bodybuilding career.

MIKE MENTZER'S ONE-SET HEAVY DUTY WORKOUT

As prescribed for Mr. Olympia winner Dorian Yates by Mike Mentzer in 1992.

Monday's Workout

Chest

Dumbbell flyes—one set to failure

Machine incline presses—one set to failure

Deltoids

Nautilus lateral raises—one set to failure

Nautilus rear delt raises—one set to failure

Triceps

Nautilus multi-triceps—one set to failure

Triceps pushdowns—one set to failure

Wednesday's Workout

Back

Nautilus pullovers—one set to failure

Lat pulldowns—one set to failure

Hammer rows—one set to failure

Traps

Hammer shrugs—one set to failure

Biceps

Nautilus multi-biceps—one set to failure

Ninety-degree preacher curls—one set to failure, plus four half-reps (partials)

Friday's Workout

Legs

Leg extensions—one set to failure

Leg presses—one set to failure

Squats—one set to failure

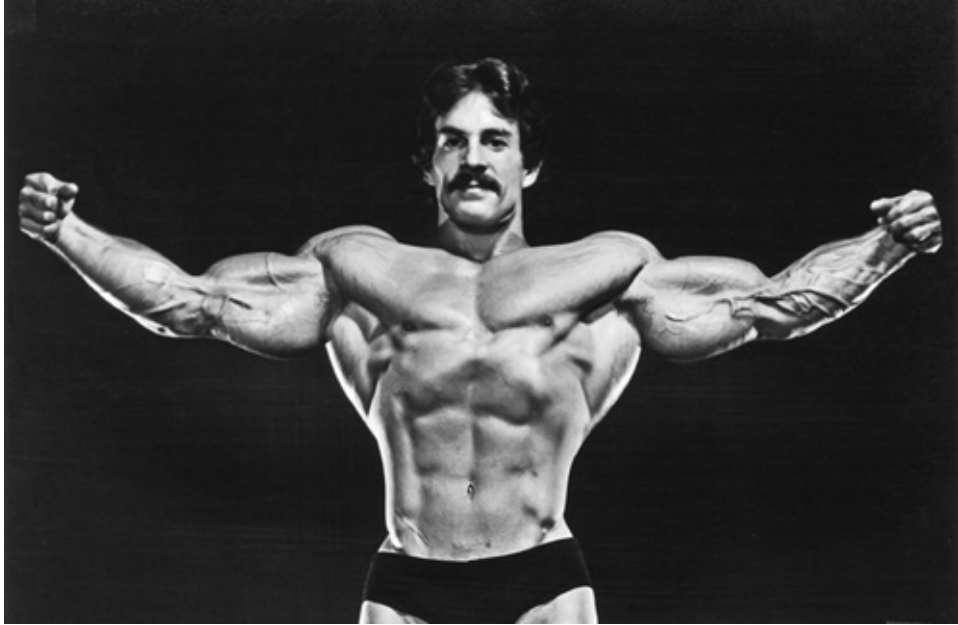
Leg curls—one set to failure

Stiff-legged deadlifts—one set to failure

Calf raises—two sets

Part IV

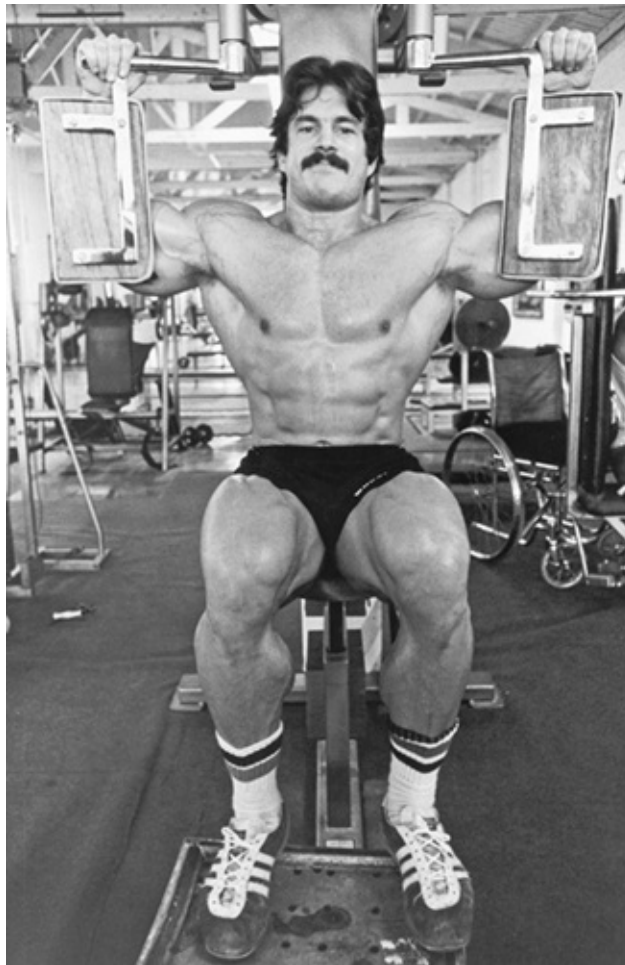
UNDERSTANDING HEAVY DUTY



(Photo by Caruso, courtesy of Weider Health and Fitness.)

Chapter 9

HEAVY DUTY TRAINING Q & A



To be productive, bodybuilding exercise must be intense, brief, and infrequently performed. (Courtesy of Weider Health and Fitness.)

While Mike Mentzer remains one of the most precise bodybuilding writers of all time, questions on certain aspects of his Heavy Duty training system, his approach to nutrition, and his philosophy abound. In this chapter, you'll find his answers to the most commonly asked questions.

THE ONE VALID THEORY OF BODYBUILDING EXERCISE

Question: I have read many articles by Mike Mentzer in which he states that there is only one valid theory of bodybuilding exercise—his. As so many bodybuilders have built great physiques without using his Heavy Duty training system, they must be doing something right—in which case, there must be other valid theories of bodybuilding exercise besides Mike's! How could Mike have made such a claim?

John Little: Simply because it's true. There is only one valid theory of bodybuilding exercise and as Mike liked to say, "It just so happens to be the theory of high-intensity training." It isn't true because Mike Mentzer said it, however; rather, he said it because it is true. Stated in the large, the theory is that exercise (bodybuilding training) in order to be

productive (to stimulate strength and size gains) must be intense (the stimulus to greater levels of muscular strength and size), brief (the other side of the coin when there is an increase in exercise intensity there must be a decrease in the number of exercises within an exercise session), and infrequent (not performed so often that one becomes overtrained). Inasmuch as bodybuilders apply these principles to their training, they make progress, and inasmuch as they apply all three principles to their training, they make continued, uninterrupted progress. Certain bodybuilders apply one, two, or three of these principles and as a result, get some degree of progress. But only the ones who apply all three consistently get (as you might expect) optimal progress.

If you lift weights at all, you can be said to engage in high-intensity exercise; even light weights represent a quantum leap on the intensity scale if you are conditioned to doing only, say, calisthenics or “zero” exercise. Since using weights will represent such an increase in intensity for some, any program that employs weight training will stimulate *some* muscle growth. After a certain point, however, the intensity must—like a dimmer switch—be increased if additional muscle growth is desired. Some will do this by making their contractions more difficult (i.e., increasing the weight, reducing momentum, or adding forced reps, static holds, or negatives to their exercises) and make additional progress as a result. Others will not, and their progress will be arrested. Some opt to add more sets of exercise to their workouts. Up to a point, this will represent an increase in their muscular output, and if the weights are light enough so they do not dramatically disturb the body’s limited reserve of recovery ability, these bodybuilders will also progress. However, their progress will grind to a halt once their muscular output reaches a certain critical level.

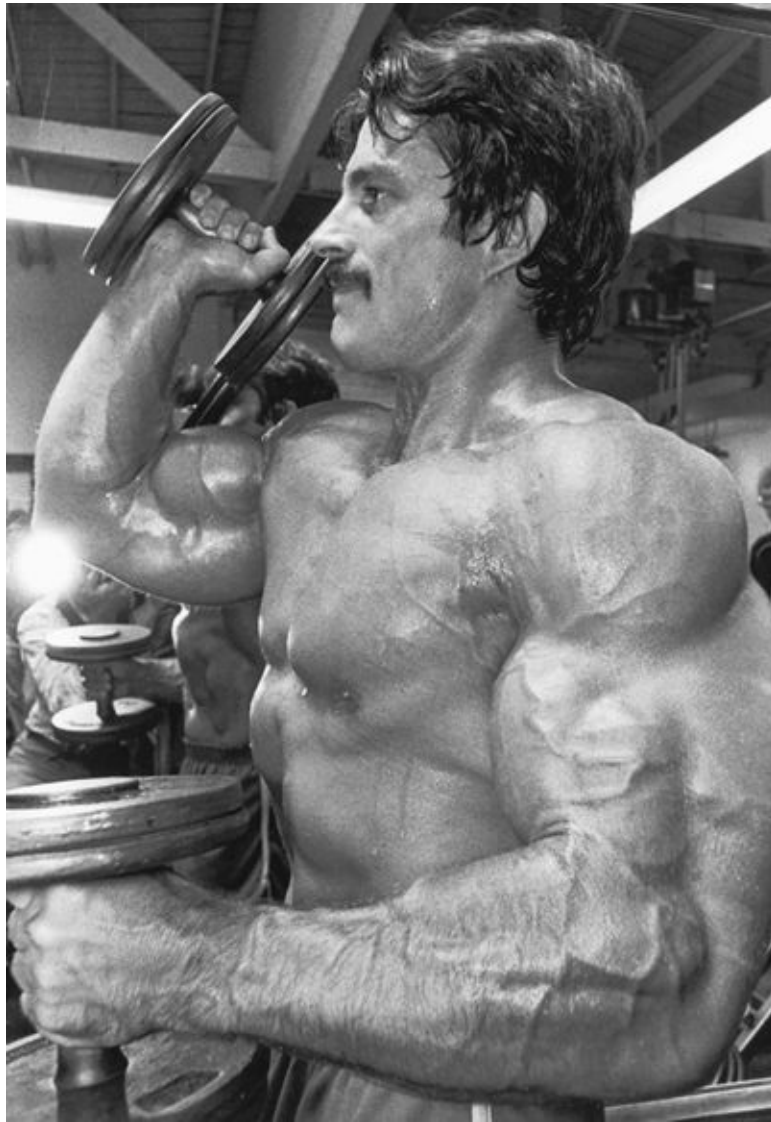
This is the point at which most bodybuilding trainees find themselves. They begin their training on a standard program, and soon their gains cease. They find they are able to increase the weights they are using, but they do not make a corresponding adjustment to the duration or frequency of their training sessions to compensate for this increased energy expenditure and thus begin to spin their wheels. It cannot be denied that they made progress—but they did so only so far as they employed one or more of the fundamental principles of high-intensity training. As stated, a beginner can get away with simply increasing the intensity of his training—but only up to a point, after which he must employ the second and third principles of high-intensity training. This simply underscores the validity of the theory of high-intensity training, it does not refute it.

Additionally, as Mike also used to point out, it’s meaningless to make comparisons between different individuals. The only person you can compare yourself to is you. The fact that a bodybuilder, or even many bodybuilders, have made progress on a nontheoretical traditional mode of training is not proof of the method’s effectiveness. These people might be on a cycle of potent anabolic drugs while training in this fashion. Or they might be genetic freaks who will grow on any type of resistance training and might have grown even faster had they effectively employed the principles of intensity, duration, and frequency.

I recall Mike once making the statement that even if another training method that required its applicants to be in the gym seven days a week, two hours a day, could produce the *same* results as his Heavy Duty system (which had his clients in the gym no more than

twice a week for twelve to fifteen minutes per workout), the additional man-hours required on the alternate system to produce the same results would be testimony to its inefficiency. In fact, you could rightly inquire whether the gains these people claimed could be considered progress at all, given the unnecessary time investment these people made. I recall that at one point during the late 1970s, two champion bodybuilders made the statement in a magazine article that, “the training requirements for stimulating muscle growth are different in everybody.” Mike’s response to this was most enlightening:

Contrary to what these two great bodybuilders might think, the cause-and-effect relationship involved in muscle growth are universal. Muscle growth results from the formation of a chemical called creatine. The presence of creatine stimulates the muscle to form more myosin, one of the contractile proteins within muscle tissue. The process is circular in nature: the contraction of muscle tissue produces creatine, which results in the muscle forming more myosin, which enables the muscle to generate stronger contractions. The greater contractions produce more creatine, and the process is started again. The amount of creatine produced is related to the intensity of muscular contraction. The higher the intensity, the more creatine produced, and of course, the greater the muscle growth that will result. The specific biochemical changes that result in muscle growth are the same for every human being on the face of the earth, and the stimulus required to induce those specific biochemical changes—high intensity of muscular contraction—is the same for everyone. And these facts have been empirically validated by physiologists; they are not the suspect opinions of nonscientists.



“The specific biochemical changes that result in muscle growth are the same for every human being on the face of the earth, and the stimulus required to induce those specific biochemical changes—high intensity of muscular contraction—is the same for everyone.”—Mike Mentzer (Photo by Peter Brenner, courtesy of Weider Health and Fitness.)

Certainly to get bigger muscles (naturally) you must get stronger, and to get stronger you must train with greater levels of intensity, and the higher the intensity level, the shorter your workout. Recall the analogy of the sprinter and the marathoner. The increased intensity of the sprinter’s muscular output reduces the distance and time he can engage in his activity, but it is also responsible for building the sprinter’s bigger and stronger leg muscles, as the harder the work you do, the less time you can spend doing it. So to not overtrain, you simply cannot engage in high-intensity training so frequently that your body hasn’t sufficient time to recover and grow. I don’t know of any exercise physiologist who would refute this last statement.

With this in mind, when Mike said that there can be only one correct theory of anaerobic exercise, the only people who attacked the statement—and Mike, by extension—were people with no understanding of the methods and applications of science, and perhaps no understanding of reality. But to whom should you listen, a person such as Mike Mentzer who scientifically and diligently used the scientific method to test the theory of

high-intensity training on thousands of bodybuilders, or a magazine article pitching a supplement, or a person who says he already has the answers because some drunken Bulgarian Olympic coach revealed them to him? I shouldn't think that gym lore, clever marketing tactics, or, for that matter, drunken Bulgarians, are the way to objective truth. In fact, the further removed a person's beliefs are from objectively verifiable truth, the more likely he is to feel threatened by and have irrational objections to a person who is comfortable with the reality of absolutes. As the famed British logician Bertrand Russell once said, "The degree of one's emotion varies inversely with one's knowledge of the facts—the less you know, the hotter you get."

WHAT ABOUT AEROBICS AND STRETCHING?

Question: I'm presently following Mike's Heavy Duty routine as outlined in the book you wrote with him, *High-Intensity Training the Mike Mentzer Way* (Contemporary Books, 2003), and I've been very happy with the results. I was wondering, however, if Mike ever suggested that people do some stretching before and after the workouts and also some form of aerobics a few days a week?

John Little: This question is easily answered on [page 135](#) of the book you cited, where Mike writes,

Make sure that you spend some time warming the muscles to be worked. However, it is not necessary to stretch the muscles, perform aerobic work, or engage in any more exercise than is minimally required to limber up and increase the blood flow to the specific muscles you're working that day. Using the deadlift as an example, if you're able to handle 165 pounds for seven reps on your working set, start your warm-up with 115 pounds for seven to ten easy reps to get the blood flowing into the area, and then one more set with 145 for two or three reps to mentally prepare you for the heavier set to follow. Where preexhaust cycles are listed, start the warm-up with the second exercise. For example, warm up with leg presses in the case of the leg extension-leg press preexhaust cycle. This will ensure that you'll have warmed up all the necessary muscles, including the quadriceps for the leg extensions, and enable you to preset the leg press weight. If you don't warm up with leg presses—which work multiple muscles simultaneously—and instead start with the leg extension, your auxiliary muscles will be cold and the weight won't be preset, making it difficult to move directly to the leg press station with no rest. Warm-up needs do vary, however, among individuals according to age, existing condition, and of course, the temperature of the gym you work out in. Keep in mind, too, that the first few reps of this high-intensity, low-force program serve as a further warm-up. The guiding principle here is perform the minimal amount of exercise required to achieve an actual warm-up.

Mike also told me that,

Stretching and aerobic activity should never be an integral part of a serious bodybuilding program. While neither stretching nor aerobics are intense forms of activity, both are still exercise and thus use some percentage of the body's resources—resources that would serve better in the recovery and growth processes. Assuming your primary goal is to gain maximum muscle size in the shortest time possible, the performance of any more exercise than the least amount required to stimulate growth is counterproductive in that it uses up

physical resources that would have otherwise been utilized in the recovery and growth processes.

In other words, the high-intensity type of training required to stimulate an optimal increase in muscle size is extremely demanding, which is why you should engage in this training for only very brief periods—and not augment it with additional work.

TRAINING IN A POWER RACK

Question: John, I note that in your books on Power Factor training and Static Contraction training, you advocate that your clients train in a power rack or “cage.” Since you knew Mike so well, do you recall if Mike ever trained in a power rack or whether he thought they held any value for, say, intermediate-level bodybuilders?

John Little: Yes, whenever heavy weights are employed, I strongly advocate the use of a power rack for safety considerations. Also, for some exercises, it is an absolute necessity simply to perform heavy overload exercises, as you can preadjust the selector bar settings. Indeed, Mike performed some pretty serious power-rack work during his competition days—and even before then! When I interviewed Mike during research for *Power Factor Training*, he related that he had used power rack training in his own training to build mass. To this end, he once wrote the following:

I do believe power rack training can be useful to the bodybuilder. I have used it intermittently through my training career and will continue to do so. When I started training seriously during my teens, I trained with both an Olympic weight-lifter and powerlifter, both of whom used the power rack extensively. Their influence on me was strong, and I adopted such training in my bodybuilding program with noticeable success. At fifteen, I was doing quarter squats in the power rack with 700 pounds for reps along with very heavy deadlifts, curls, and presses. I learned early to enjoy the pleasures of heavy lifting, and I believe this type of extreme overload so early in my career laid the foundation for my subsequent gains in mass and power. It also made me comfortable in attempting all-out efforts as well as predisposing me to high-intensity training. It's very important to perform full-range exercises at all times in your training program to ensure fully developed muscle. At those times, however, when you seem to have reached a plateau in your progress, the sudden imposition of an extreme overload should jolt your musculature into a new growth cycle.

I wouldn't worry about performing heavy partial reps in the power rack for smaller muscles like those in the upper arm. Rather, I suggest you concentrate on stimulating the bigger muscles such as in the legs and back as well as the pecs and delts. I wouldn't attempt heavy rack work every training session for each bodypart either. Every second or third workout, include some power rack training for each of the major muscles.... Make sure you're always warmed up before attempting such heavy-duty overload training, and emphasize strict exercise performance. Since such training is highly demanding and could lead to overtraining, don't stay with it longer than two months.

Mike further revealed,

The last time I engaged in any serious rack work was with Casey Viator, when he first

moved to California. We performed full-range exercises with barbells and on Nautilus machines, but we performed some very heavy rack work as well. In the quarter-squat, Casey and I both got up to more than 1,100 pounds for a few reps, 800 in the half-squat, and more than 500 in the full squat for six to eight reps. We used 625 pounds for quarter reps in the incline press and more than 400 pounds for half reps. We both used similarly impressive poundages in the deadlift and press behind neck. And while no one has ever accused either Casey or me of lacking size, we both noticed appreciable mass increases during that period of power rack work.



“In reality, there is no steadfast rule about red and white fibers and their physiological role. It cannot be stated with any certainty that just because a fiber is white it’s fast or that one that is red is necessarily slow.”—Mike Mentzer (Photo by Warner, courtesy of Weider Health and Fitness.)

RED AND WHITE MUSCLE FIBERS

Question: I’ve read all of Mike Mentzer’s books and haven’t found anything about red (slow twitch) and white (fast twitch) muscle fibers. As Mike was well versed in exercise physiology, I’m a little surprised at this omission. Do you know what Mike thought about the issue of red and white muscle fibers, or how a bodybuilder can determine which fiber type predominates in his body?

John Little: While Mike may not have addressed the issue of fiber typing in his books, he did in his seminars and other writings. I recall him speaking very eloquently on the subject during a seminar he conducted in Toronto, Canada, in 1981. I believe that Mike didn’t touch on this issue in his books largely because he felt that a conclusive verdict still wasn’t in on this subject. And even if it were, it did not alter the fact that a high-intensity training stimulus is the only one that will result in size and strength increases in human muscle tissue. In looking through my personal archive of Mike Mentzer materials, I find that Mike did address this point in print on at least one occasion, and I have excerpted the following from the relevant passage:

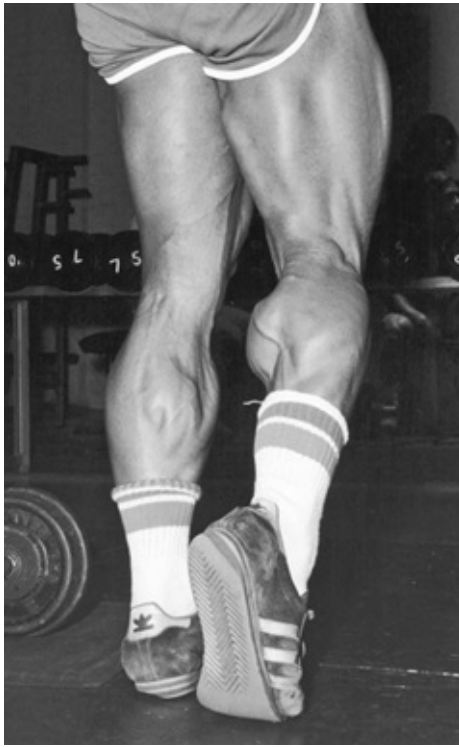
There are physiologists who believe that man has two types of skeletal muscle. One type,

commonly referred to as fast twitch, is white in color and is responsible for explosive movements such as sprinting or lifting weights. The second type, referred to as slow twitch, is red in color and is thought to be involved in endurance activities. Some so-called weightlifting authorities contend that working both fiber types by performing repetitions slow and heavy in some sets, and fast and light in others will result in faster muscle growth. However, I doubt this very much. The fact of the matter is that there are fast and slow red fibers and fast and slow white fibers in the lower animals. And in humankind, it is believed that the actual difference between the two fiber types is even less. Moreover, the exact distribution of fiber types is not known, and some believe that there are not two, but eight fiber types. In reality, there is no steadfast rule about red and white fibers and their physiological role. It cannot be stated with any certainty that just because a fiber is white it's fast, or one that is red is necessarily slow.

When I was in Holland recently [circa 1981], I had an opportunity to visit with the eminent Dutch exercise physiologist Dr. Jan Voss. Dr. Voss was one of the early researchers into muscle fiber types, actually performing numerous muscle biopsies—which are quite painful—on himself as part of his research. Dr. Voss told me that the color of the muscle tissue in his gastrocnemius (or calf muscle) would change week to week. Some weeks there was a predominance of red fibers, some weeks white. He went on to say that these changes may actually take place day to day or even hour to hour, depending on such things as temperature, rate of existing metabolic activity, and so forth.

Because it's impossible to classify muscle fibers into fast and slow, no application can therefore be made to one's training. What can be stated definitely, however, is that you should never perform your exercises in a fast fashion, as when the speed of a repetition exceeds a certain rate, momentum comes into play and thereby diminishes the intensity of muscular contraction. What happens in such instances is that the weight ends up being thrown rather than lifted. Fast repetitions, therefore, are unproductive and dangerous—dangerous because throwing a weight increases the force being imposed on your joints and connective tissue.

For best results, initiate each repetition in each of your bodybuilding exercises slowly and deliberately, and proceed through the positive range of motion in a like manner. Pause momentarily at the top or contracted position, then lower the weight deliberately and under full control.



Mike Mentzer advocated performing slightly more repetitions for the legs as he believed that the neurological efficiency of the legs—the number of muscle fibers activated during a maximal contraction—is extremely low. (Courtesy of Weider Health and Fitness.)

HIGHER REPS FOR LEGS

Question: I recently purchased your and Mike's book *High-Intensity Training the Mike Mentzer Way* and love it! I've already read it through twice and am making progress each and every workout. A question occurred to me, however, when reading: why did Mike advocate higher reps (e.g., twelve to twenty, on [pages 134](#) and [135](#)) for the legs and lower reps (e.g., six to ten) for the upper body?

John Little: Thanks for your kind comments about Mike's last book. The reason why Mike advocated higher reps when training the legs is explained by random genetic variation within an individual's neuromuscular system. Mike's view was corroborated to a large extent by research conducted during the early 1980s by Arthur Jones and associates at Nautilus Sports/Medical Industries (NSMI) in DeLand, Florida, which indicated that the lower body required a different type of training than the upper body. Mike once wrote about this discovery as follows:

NSMI found that the neurological efficiency of the legs—the number of muscle fibers activated during a maximal contraction—is extremely low. The neurological efficiency of the muscles in the upper body is considerably higher. Activating more muscle fibers in a maximal contraction involves more oxygen and lessens the muscles' endurance. Developing a muscle maximally requires regular stimulation of as much of the bulk of the muscles as possible. If you regularly stimulate 25 percent of the fibers in a muscle, that muscle will grow to a certain size. Stimulating 50 percent of that muscle's fibers would certainly result in more growth. Since a very small percentage of the thigh's muscle fibers are activated even on a maximum contraction, it would seem logical that the thighs require high reps to stimulate a high percentage of the fibers.

This intrigued Mike, and he began to look into how many reps the legs should be trained with ideally. I also recall that Ray Mentzer, likewise, looked into the issue of performing higher reps for the legs and came to similar conclusions as his brother. According to Ray,

Why so many reps [for the legs] you ask? Well, there are many reasons, but the basic one is this: neurologically the thighs have a much different pathway. If the leg or thigh neurons' firing rate was the same as that of your arms, delts, or chest, you wouldn't be able to walk any distance! Do you ever get writer's cramp? Just think if you had that same firepower in your thighs! You wouldn't be able to get to your front door or climb any steps! The thighs and legs have a neurologically designed structure for endurance—for long, heavy, arduous tasks. So overloading as heavy as possible for ten to twenty reps will work much deeper fibers. Some people even do as high as fifty repetitions—I've even heard of up to one hundred—with good results from only one set!

Mike even went on to conduct informal tests on various high repetition schemes, as the NSMI research was only preliminary in the 1980s. He began by dramatically increasing the number of reps for each of his leg exercises. Whereas in the past he had performed six to ten reps, he increased that number to fifty reps, with the last rep being as close to failure as possible. He noted,

Your cardiovascular system will adapt to the increased demands so that you can move an appreciable weight to an approximately fifty-rep failure. At that point, try seventy-five reps per set, then one hundred, and beyond, but be sure to carry each set close to or actually to failure, and don't do more than two sets for the thighs.

However, eventually Mike found that over a certain threshold, performing higher reps had little to no effect on stimulating additional muscle growth. When he trained with repetitions ranging upward of twenty—such as fifty to one hundred—he was dividing the stimulus for adaptation between the aerobic (endurance) pathways and the anaerobic (or strength and size building) pathways, thus compromising the muscle-building effect in favor of the endurance-building effect. By the 1990s, Mike was not in favor of such excessively high-repetition sets (if, indeed, he ever was), having experimented for himself and not been duly impressed.

He often said, “Bodybuilding is not aerobics,” and that one should train anaerobically (i.e., with high intensity and brief duration) to keep the training stimulus solely within the anaerobic pathways so that one is not compromising training efforts or objectives. As such, he noted that performing reps beyond twenty was not only unnecessary, but actually counterproductive to a bodybuilder's aspirations of building size and strength. He did hold, however, that the neuromuscular efficiency of the arms, for example, was much greater than the legs, with the result that while one could thoroughly stimulate the biceps and triceps with a repetition protocol of only six to ten reps, the legs, by contrast, required more reps, the range of which he placed at twelve to twenty (with twenty being the absolute maximum). On all sets, however, whether for the legs or any other bodypart, Mike advocated that the key was to train with the highest intensity of muscular contraction

that you can generate, and to take each set to a point of muscular failure.

HEAVY DUTY FOR POWERLIFTERS

Question: I am considering entering a power-lifting meet. While I have been using Mike's Heavy Duty training principles in the book *High-Intensity Training the Mike Mentzer Way* with good results, I was wondering how or if I should modify his program in order to better prepare for competition in powerlifting?

John Little: The basic principles laid down in Mike's books and courses will work for anyone seeking strength gains, since the requirements are essentially the same as those involved in developing muscular size. Some initial strength gains can be made by recruiting more fibers in a given contraction. Beyond that, a person must make his muscles grow larger if he desires to become stronger, since size and strength are proportional. You might point to a smaller, less-developed person who can outlift a bigger, more-developed man. But remember, you can't accurately compare the strength of two different individuals in this way because individuals are always different. For example, bone lengths vary along with leverage factors, tendon attachments are different and therefore alter mechanical elements, and there are many other considerations. Mike once addressed this very issue in his writings and his comments, which I believe hold relevance to your particular concerns:

Top champs like Tommy Kono in Olympic lifting and Mike Bridges in powerlifting had to move up through several weight classes as they got stronger, because they unavoidably grew bigger. If I were you, I would modify the routine contained in the Heavy Duty book by performing fewer preexhaustion supersets and doing more single isolated sets, or by combining straight sets with preexhaustion sets. For example, when doing legs, start with squats and perform two low-rep sets (three to seven reps) with maximal weight and then go on to a preexhaustion cycle. You might also set aside Saturdays for the performance of the squat, bench press, and deadlift in Rest-Pause fashion for two sets and the performance of one auxiliary movement for each lift in negative-only style. A combination of Rest-Pause and negative-only should produce tremendous gains. Be careful not to do more than I suggested, or you'll burn out.

IS A PUMP NECESSARY FOR BUILDING MUSCLE?

Question: I know that Mike Mentzer believed that getting a pump while you work out did not necessarily mean that you had stimulated growth—but I like the feeling of having my arms pumped up. Ironically, I don't always get a great pump each and every workout, which has caused me to wonder just what a pump is from a scientific standpoint, and whether or not it can be effected by diet, drugs, or anything else.

John Little: You're quite right when you say that Mike's view of the pump was that it does not necessarily indicate growth stimulation being imparted to a given muscle group. As Mike once pointed out,

Jump down and pump out thirty rapid-fire pushups, and you should feel an appreciable pump in your pecs and triceps. It's doubtful, however, that those thirty quick push-ups

stimulated any growth, since the intensity was too low for a bodybuilder of any experience. Also, look at powerlifters and the manner in which they train. They get little in the way of pump, yet they're the most muscularly massive of all the strength athletes.

It's also true that the pump does afford a good feeling, being the "bodybuilder's rush and fix," as described by Charles Gaines in *Pumping Iron*. Psychoanalyst Wilhelm Reich noted that all pleasurable sensations are characterized by the flow of blood and energy to the periphery of the organism from its center. This is felt subjectively as expansion—as in orgasm. So Arnold didn't realize how close to the target he was when he associated the pump with orgasm in the movie version of *Pumping Iron*.

You can enhance the selective redistribution of blood volume in the body (which is one way of describing the pump). Remember that our muscles are comprised of over 70 percent water, and that water is retained, or "held," in the muscle by glycogen and the presence of electrolytes. Three grams of water are stored in the muscle for every gram of glycogen. If you have ever been on a low-carbohydrate diet for any length of time, you've no doubt noticed the profound diuresis, or loss of water, that results initially. Once you have used up the glycogen stored in the muscle, the water that was bound to it leaves the muscle. This not only causes the muscle to deflate, but it also results in a loss of total blood volume and a reduction in pump-ability, as the pump is nothing more than the accumulation of blood and fluids in the muscle and its capillaries. This accumulation of fluids ordinarily results from performing a number of reps, at least six or more, in immediate succession. These successive extensions and contractions literally pump more blood into the area. If, however, total blood volume is down and the fluid pressure within the muscle has been lowered, through a low-carb diet, for instance, it will be difficult to achieve a pump at all.

Of crucial importance, therefore, is total blood volume and fluid pressure within the muscle itself. Maintaining optimal blood volume is simple enough: make sure you have a well-balanced diet that includes adequate carbohydrates, electrolytes (potassium and sodium), and water. Chronic overtraining can lead to staleness and difficulty in achieving a pump.

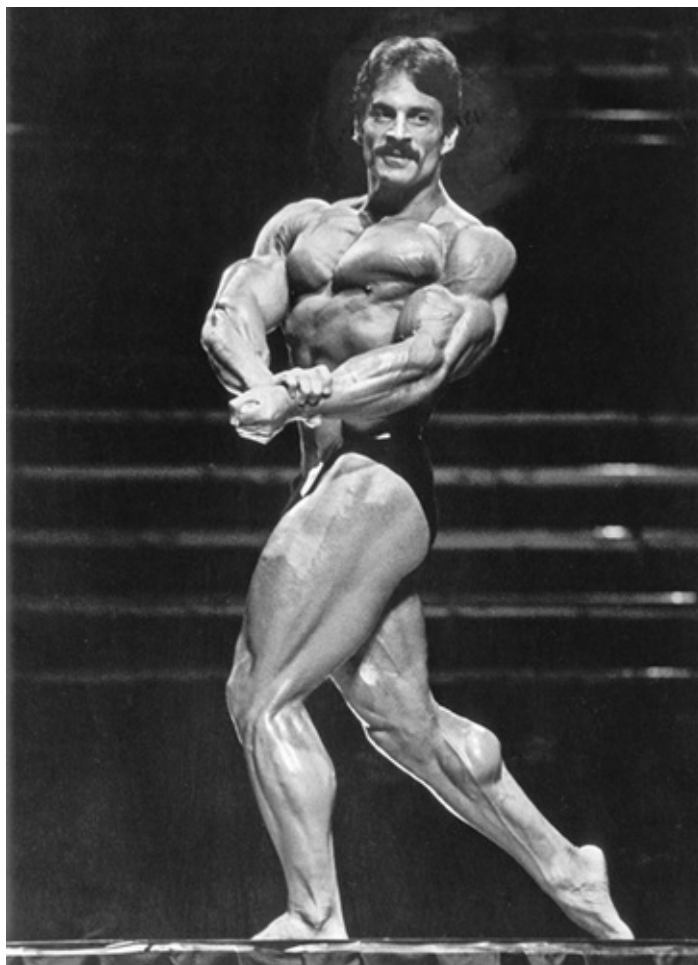
Overtraining prevents the body from ever fully recovering from the exhaustive effects of exercise. In such a situation, the muscles never completely regain their supply of glycogen and other important nutrients. Again, such a state diminishes pump-ability.

Anabolic steroids enhance the pump only insofar as they cause the body to retain sodium (an electrolyte) and hence water as well. This definitely results in increased blood volume and fluid pressure. Uncontrolled, the sodium-fluid retention that results from steroids can raise the blood pressure to dangerous levels and is therefore not a safe, reliable way to enhance the pump. Eat a well-balanced diet, get adequate rest, don't overtrain, and you should never have any trouble getting a pump.

I should also point out another of Mike's observations in regard to the value of a pump in bodybuilding. It occurred when we were both in Gold's Gym where Mike conducted his personal training business. A young trainee recognized him and came up and began to question Mike about his Heavy Duty training methods. The young fellow launched into a series of objections to Mike's methods, which Mike listened to with far more

graciousness, in my opinion, than the individual warranted. The fellow concluded by saying, “High-volume training gives a great pump to the muscles, and the pump is the only thing that stimulates muscle growth.” Mike raised an eyebrow, and a grin spread about his face. “Young man,” he began,

Take a look around you in this gym; you will see that almost every bodybuilder in here is getting a good pump today. If the pump were the sole factor that resulted in muscle growth, then each of these gentlemen would be sporting twenty-five-inch arms, sixty-inch chests, and thirty-inch thighs—because some of them have been getting a “good pump” each and every workout, year in and year out, for over fifteen years. I’ve been around this gym for over fifteen years, and it’s been my observation that not one of these people has gotten any bigger; they all look the same because they have not increased the intensity of their muscular contractions. They have all pumped and pumped and pumped, and they all felt good about their training efforts because the temporary ischemia the pump provided made them feel bigger than they were before they worked out. However, when they left the gym, their pumps subsided—as it is only a temporary filling of the vasculature with blood—and their muscles returned to the same size they were before the workout. Everybody gets a pump, but not everybody gets bigger. A pump is never an indicator of muscle growth being stimulated and in truth, has virtually no effect at all on the muscle-building process except in the case of rank beginners.



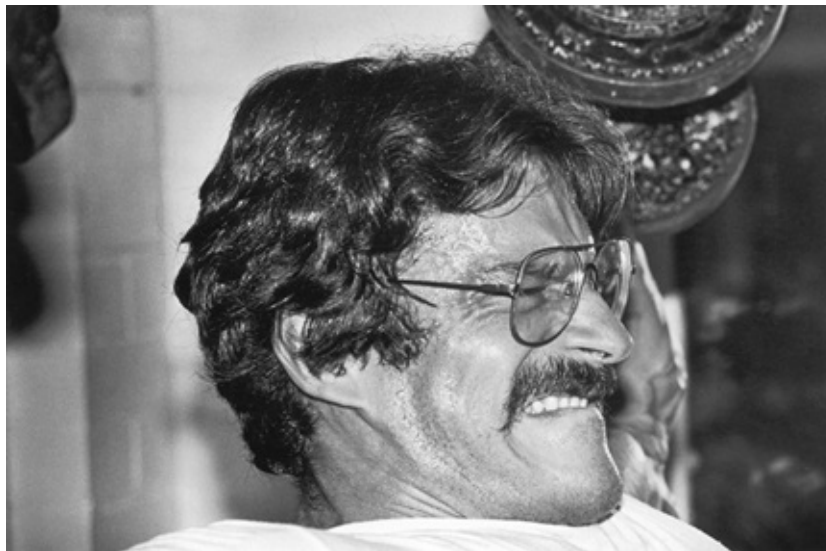
Mike Mentzer transitioning between poses at the 1980 Mr. Olympia contest in Sydney, Australia. He did not necessarily believe that a muscular “pump” was indicative of growth having been stimulated in a muscle. (Photo by John Balik, courtesy of Weider Health and Fitness.)

The young fellow's jaw went slack, and I can still see his face, looking as though his world had just changed, as Mike and I left Gold's Gym.

A PERSONAL WORKOUT FROM MIKE MENTZER

Question: Did Mike ever prescribe a Heavy Duty workout for you?

John Little: Yes, he did. In 1992 after Dorian Yates had won the Mr. Olympia title I was asked by Chris Lund, who was then the publisher of the British version of *Flex* magazine, to call Mike to interview him for a forthcoming edition of *Flex* (UK). Mike described the workout that he had put Dorian Yates through and that he had, indeed, employed with such great success with his phone consultation and in-the-gym personal training clients. As Mike spoke about the principles underlying his new understanding of high-intensity training and of his many clients' success while using his new workout routine, I became more and more fascinated. Finally, I asked Mike if he would prescribe a workout program for me that I could employ at my home in Canada. At the time, the area that I lived in did not have a commercial gymnasium, and no one had access to Nautilus equipment (Mike's preferred choice of exercise equipment). As I had primarily free weights and one or two machines at my disposal, Mike prescribed the following Heavy Duty workout for me to follow:



Dumbbell laterals were one of the exercises that Mike Mentzer prescribed for clients who trained with free weights. (Photo by Bob Gardener, courtesy of Weider Health and Fitness.)

Monday: Chest, Shoulders, and Triceps

1. Dumbbell flyes—no rest; dips (full range)—one set to failure
2. Rest one minute
3. Dumbbell laterals—one set to failure
4. Rear raises—one set to failure
5. Triceps pressdowns—one set to failure

Rest two days.

Thursday: Back, Traps, and Biceps

1. Close-grip pulldowns—one set to failure (emphasize the contracted position on each rep)
2. Barbell rows—one set to failure
3. Shrugs—one set to failure
4. Barbell or preacher curls—one set to failure

Rest two days.

Sunday: Legs

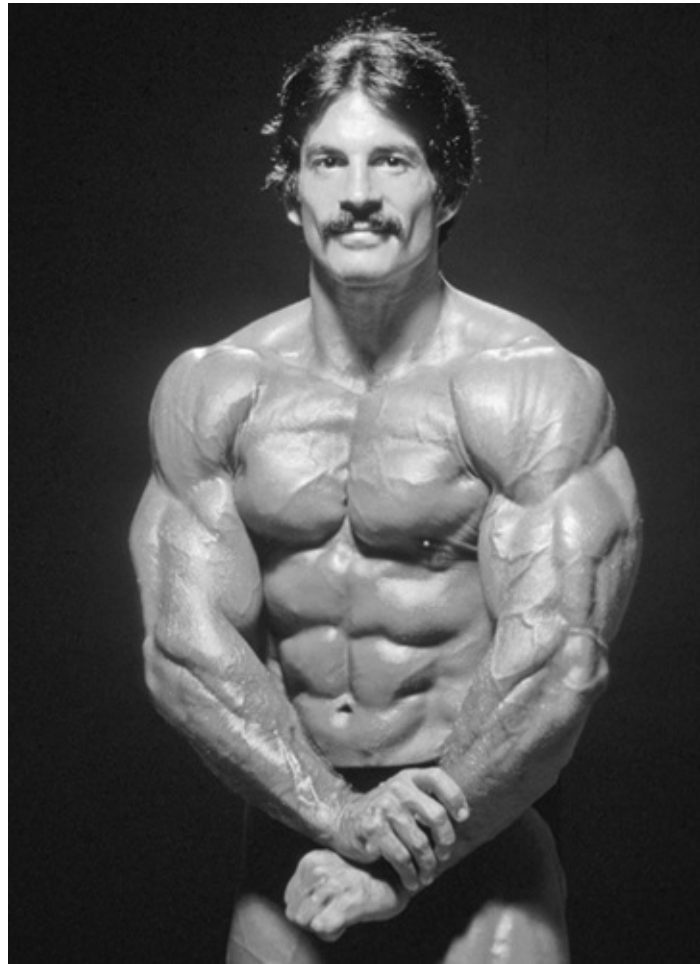
1. Leg extensions—no rest; squats—one set to failure
2. Leg curls—one set to failure
3. Toe raises—two sets to failure

Take two days off; then repeat the three-work-out cycle.

Although Mike would later modify such a program, I'm surprised in reviewing it presently at just how good this one is. In terms of repetitions, Mike told me that number of reps weren't that important (a view recently supported by the *Journal of Physiology*); I should aim for four, five, six, seven reps—but when I got to twelve or thirteen reps, I should add 10 percent more resistance. Mike also told me, since I was training alone without the benefit of a training partner or a power rack, that I should go “almost” to positive failure—for safety reasons. As he explained, “If you realize that you can do one more rep [if you're training alone], don't do it—instead hold the resistance for as long as possible and then lower it slowly under control.” Of course, he also strongly advised that I should keep a training journal to know how I was progressing and when overtraining might be creeping into my schedule. With regard to sets, Mike reminded me that “one set more than the least amount required is overtraining. Perform one set per exercise and no more than two sets per muscle group.”

Each of the preceding workouts, Mike advised, should take no longer than fifteen minutes and should be performed every third or fourth day, for a total of approximately four hours of training time per month. He told me that one of his clients, training only four hours per month, gained thirty pounds of muscle in only three months' time. He had found that having trainees train the legs, back, and biceps together was too demanding (along with chest, shoulders, and triceps on the other workout—as he had prescribed in his original Heavy Duty courses in the late 1970s), so he split the routine up more by having trainees train the legs by themselves.

Ironically, I never had an opportunity to employ this workout, as I got the call to move to California and write for Joe Weider the next day and all of my remaining energies were then invested in preparing and making the move. Once I got to California, I had a membership in a commercial gym with lots of equipment and began to develop *Power Factor Training*.



Mike Mentzer enjoyed a profound reputation as being one of the most successful personal trainers in bodybuilding history. One of his clients, training only four hours per month, gained 30 pounds of muscle in only three months' time. Mike's insights into the science of muscle growth were truly revolutionary. (Courtesy of Weider Health and Fitness.)

Again, now that I look back at this program Mike had prescribed for me, I see how well thought-out it is and believe it represents almost the ideal routine for those with good to average recovery ability. If you train in a commercial gymnasium and want to employ it, then you might want to substitute Nautilus machines (the older the better) wherever possible or simply use the free-weight exercises as prescribed for optimum results. For those with moderate to low recovery ability, or who are nearing the limits of their genetic potential, taking more time off in between workouts as outlined in *High-Intensity Training the Mike Mentzer Way* or employing Mike's consolidation routine (which is outlined in this book) would be a better fit.

MIKE MENTZER AND STATIC HOLDS

Question: Did you ever share with Mike Mentzer your views on Max Contraction?

John Little: Yes, I told Mike about it back in the late 1980s, when I first conceived and wrote about the protocol (I had published a small series of articles on the method in the British version of *Flex* magazine in 1989), and then again from time to time after we had each published our own books (Mike's *Heavy Duty* and *Heavy Duty II: Mind and Body* and my *Power Factor Training* and *Static Contraction Training*, which I wrote with Peter Sisco). Mike, as you may know, was very much influenced by the research of Arthur

Jones, who was a brilliant man in his own right and created the revolutionary Nautilus exercise machines that were all the rage during the late 1970s and 1980s. It took Mike a while before he began to critically analyze some of Jones's theories with regard to high-intensity training. Up until the early 1990s, Mike accepted the "need" for a full range of motion as advocated by Jones, as well as the belief that muscles will atrophy if you don't train them in ninety-six hours, which was advocated by people like Ellington Darden, Ph.D. However, near the end of his life—and you can read this yourself on [pages 97 to 100 of High-Intensity Training the Mike Mentzer Way](#)—Mike not only advocated but trained many of his clients with great success using static or Max Contraction holds. He writes,

Now I have most of my in-the-gym clients as well as my phone consultation clients perform fully contracted "holds" to failure ... and the results are stunning, to say the least. I ascribe my clients' greater progress recently, in part, to the holds making a greater inroad into existing strength than do positives.

Mike shared my view that this protocol was best employed with isolation exercises, or those exercises that in his words, "involved rotary movement around one joint axis, and which provide resistance in the fully contracted position." For this reason, he had many of his clients perform fully contracted "holds" on Nautilus machines, which took advantage of at least one reason why the Nautilus machines were created in the first place, to overcome the paucity of effective resistance or load provided by the barbell when it came to the one position in the range of motion at which full contraction of the muscle was possible.

I even recall witnessing Mike put six-time Mr. Olympia Dorian Yates through a chest and biceps workout in 1993, in which Mike had him perform static holds at the end of his sets. He had Dorian hold the resistance in a position of full contraction—on an Icarian incline chest press machine and a Nautilus multi-biceps machine, respectively—for a period of fifteen seconds, and Dorian loved the effect it had on his muscles. I don't know if he was experimenting with this technique as a result of our conversations or whether he simply came to a similar conclusion on his own. Perhaps it was the latter, as Mike was constantly experimenting. Typically, Mike would have his clients perform a static hold at the end of a regular set, but he even had them substitute the odd set of regular, full-range exercise on the leg extension, for example, with a static hold in the position of full contraction.

I remember speaking with Mike about the success and rationale of my Max Contraction system during its evolution many times over the years, and he, like me, saw the inherent potential of the protocol. Where our approach differed was that Mike would then have his clients perform this incredibly efficient form of training only sporadically, as if—even when such issues as volume and frequency were well regulated—too much of a good thing (i.e., thorough muscle stimulation) was somehow a negative. It is true that high-intensity training can be a negative thing in terms of the demands it makes upon the body's energy systems (i.e., recovery ability), but this should never be allowed to become a negative if the frequency of training is adequately adjusted. If this means you are training but once every three weeks, so what—as long as you are making progress. As Mike used to say, "Progress should not be an unpredictable, haphazard affair; you should

witness progress every workout.”



The Nautilus leg extension machine is excellent for training the quadriceps muscles of the frontal thighs with static holds. (Photo courtesy of the Mike Mentzer archives.)

MENTZER AND ANOTHER “MACHINE”

Question: Someone told me recently that Mike Mentzer was something of a pioneer in EMS (electrical muscle stimulation) and that prior to his winning the Mr. America contest in 1976, he actually incorporated EMS machines into his workouts while building muscle. Is this true?

John Little: That’s true—and this was years before anybody had ever heard of EMS, which only goes to underscore how ahead of his time Mike really was. In 1974, just shortly after he returned to the East Coast from a lengthy trip to Deland, Florida (where he trained with Casey Viator and talked training for many months with Nautilus impresario Arthur Jones), Mike began to work with Dr. John Ziegler, a Washington, D.C., physician of some repute in the world of bodybuilding and strength training. Mentzer would later recount his experiences with Dr. Ziegler on [pages 67 to 68](#) of *High-Intensity Training the Mike Mentzer Way*, from which the following quote has been excerpted:



Mike Mentzer was also involved in early research with electrical muscle stimulation (EMS), which was pioneered by Dr. John Ziegler, a Washington, D.C., physician. Mike believed the EMS machine held merit in stimulating increases in strength and size. (Photo by Warner, courtesy of Weider Health and Fitness.)

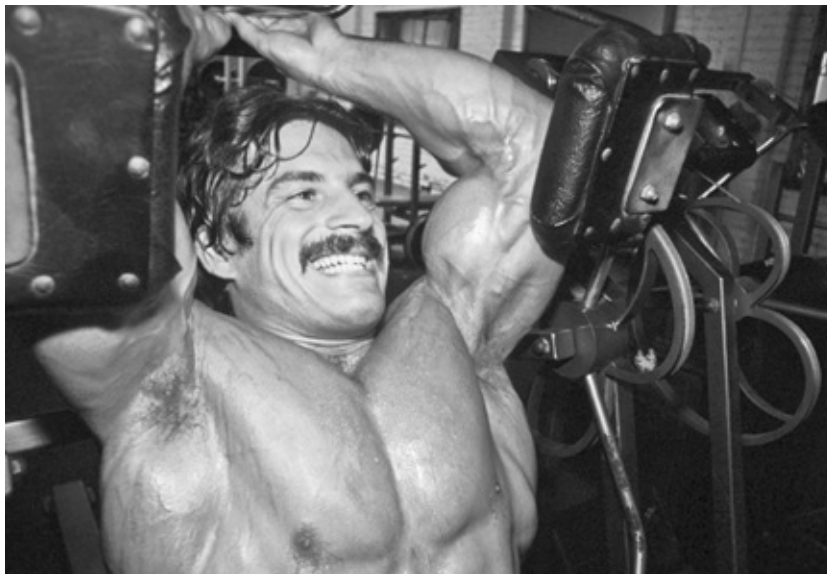
Before moving to California to pursue a career as a professional bodybuilder, I lived in a suburb of Washington, D.C., and worked for a time as an assistant to Dr. John Ziegler.

Ziegler was something of a pioneer in sports medicine; he had been the physician for the American Olympic weightlifting team, had trained champion weightlifters and bodybuilders such as Bill March and Vern Weaver, and even had a hand in helping to develop the anabolic steroid Dianabol. Ziegler, in fact, is often cited as the person responsible for introducing anabolic steroids to the American sports scene—something I’m sure he considered to be a rather dubious distinction.

What made Doctor Ziegler even more interesting was his world-famous “electronic muscle stimulator.” With the assistance of an electronics engineer, Ziegler developed a machine that could contract any of the body’s skeletal muscles to varying degrees—including maximal contraction where every fiber of a given muscle is activated. The Federal Trade Commission investigated Ziegler’s machine and claimed it was harmless, because it wasn’t supposed to work. Well, the machine most certainly did work, since my brother and I were giving each other treatments, as well as administering them to injured athletes and those who were handicapped or had lost the use of certain limbs.

One individual who was in almost constant touch with Mike during this period was his old friend and sometime training partner Roger Schwab (presently the proprietor of the

hugely successful Mainline Health and Fitness Center in Pennsylvania). In a recent conversation with Roger, I asked him about Mike's use of Ziegler's machine, which Schwab recalled vividly. He informed me that since he had continued to keep in touch with Mike after Mike returned to Maryland, it wasn't long before Mentzer told him of Ziegler's machine, with the result that Schwab decided to check it out for himself:



For most exercises Mike Mentzer recommended repetitions in the range of six to ten. (Courtesy of Weider Health and Fitness.)

Mike told me about it and it sounded very intriguing, so I went down to see Mike and Dr. Ziegler once a month, over the course of a year, maybe ten or twelve times. And the machine was incredible—you could put it on any bodypart—and you turned the volume up and it would contract the muscle, sometimes really intensely. We put it on our calves and abs, pecs, delts and arms and Mike was using it twice a week—and I was using it once a month—and it gave me the opportunity to spend the day with him. You would sit or lay there and then he would dial up the intensity. It felt like you were really fatiguing the muscle even though you weren't doing any lifting, but it felt afterward like you had done a workout. It was not a continuous buildup. It was an intermittent buildup—contract/relax, contract/relax—but that was Mike; always on the lookout for new ways to build more muscle.

HOW MANY REPS?

Question: I recently purchased the book you worked on with Mike Mentzer—*High-Intensity Training the Mike Mentzer Way*—and am following the “Ideal (Principled) Workout” (Chapter 13). I am making the best gains of my life! However, I have a question for you regarding the repetition scheme that Mike advocates. Why does he recommend such low reps (e.g., three to five, and one to three) for exercises such as the bench press and dips?

John Little: Thanks very much for your kind words about Mike's last book. In answer to your question, Mike found that the lower reps produced better results in these two exercises, particularly if these exercises were performed back to back as part of a preexhaustion or superset sequence. In addition, performing too many reps tends to take

the exercise in the direction of endurance (i.e., a longer, almost extended set), which is the opposite direction of where the trainee should be heading (i.e., he should be keeping solely within the anaerobic pathways). As an exercise that is carried on for ninety seconds will be using almost a perfect fifty-fifty split of anaerobic to aerobic pathways, the shorter the set, the more productive it is for size and strength increases. Also, it has been established clinically that intensity is the key factor, and that sets even lasting as little as a second can stimulate a size and strength increase.

So the heavier the weight, the more productive the exercise. In this instance, coming as it does as the second exercise in a preexhaustion cycle, the objective is simply to get another two or three intense contractions out of the preexhausted pectoral muscles—something that the heavier weight and reduced-repetition range accomplish very well, without compromising the training stimulus between the anaerobic and aerobic pathways.

WHY WORK THE CHEST FIRST?

Question: I note from Mike's writings that he claims to have been influenced quite heavily by the research of Nautilus inventor Arthur Jones. If this is the case, why does Mike recommend training the chest first during his "Chest and Back" workout? Arthur Jones, if I'm not mistaken, always recommended working the largest muscle groups first in the workout and finishing with the smaller muscle groups. The back is certainly a bigger muscle group than the chest, so why would Mike not work the back first?

John Little: Your question contains within it the false supposition that Mike was simply a blind follower of Arthur Jones's training beliefs. It's true that Mike advocated many of the principles that Jones espoused (and in some cases pioneered) and Mike held to be valid. But Mike differed in many areas from what Jones advocated—for instance, by advocating a split routine and taking more than ninety-six hours off in between exercise sessions.



Mike Mentzer always began his contest dieting well in advance to make sure he had adequate time to rid himself of body fat, and he always appeared on stage with tremendous definition. (Photo by Caruso, courtesy of Weider Health and Fitness.)

The simple answer to your question is that Mike advocated this particular structuring (e.g., of chest before back) because he found that it was very effective for his clients. Mike trained somewhere in the neighborhood of two thousand people throughout his coaching and personal training career, and this was the protocol and sequence that he most typically advanced as being the most effective. Part of the reason is that the chest work serves to warm up many of the larger back muscles that will be trained *hard* next. In addition, many clients found that if they hit the larger muscle group of the back first, they would run out of energy and lack sufficient gas in their tank to train their chest effectively. Mike discovered that this problem did not exist if the chest was trained first, however.

The “largest to smallest” sequence as advocated by Jones is a good one—particularly for beginners who are working their whole body three times a week (as Jones recommended). However, the stronger you get, the more energy you will expend on each exercise. If you happen to train the largest muscle groups of the body first, you can very quickly exhaust yourself, leaving little to no effective energy to devote to the smaller muscle groups that remain to be trained. Many individuals were so spent after training large muscle groups such as the legs and back in that sequence, that they were unable to train even a small muscle group like the biceps with the high intensity required to stimulate additional growth in these smaller muscle groups. That was why Mike broke yet again with another aspect of Jones’s teachings.

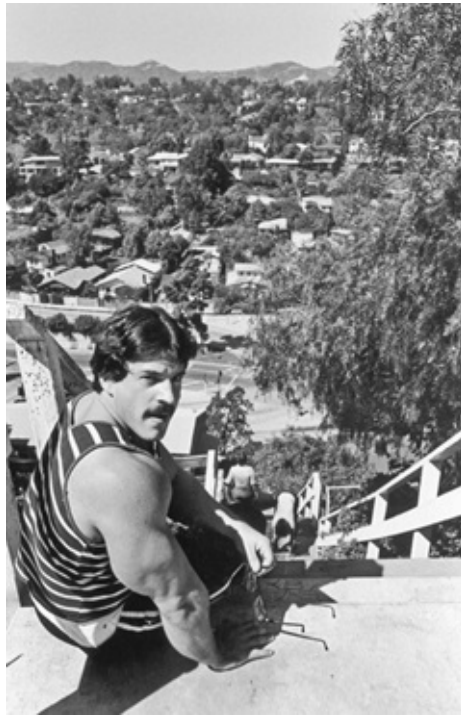
LOSING BODY FAT REALISTICALLY

Question: John, I'm becoming very serious about my bodybuilding and am seriously thinking about entering a contest soon. The contest is only five weeks away, and in order to be ready, I must lose a lot of fat since I'm pretty smooth at present with almost no cuts and definitely no striations. My goal is to lose about 30 pounds of fat in the next five weeks. Do you know if Mike Mentzer had any dieting tips he recommended to bodybuilders seeking to lose this much fat?

John Little: I'm sorry to be the bearer of bad news, and if Mike were here he would tell you the same thing, but you're asking for the impossible. Five weeks is just not sufficient time to lose thirty pounds of fat. The most you can realistically hope to lose in five weeks would be about seventeen pounds, and even then that might be stretching it a bit. Most people will not lose more than a few *ounces* of fat a day even while on a very strict diet, and what you're looking to accomplish would equal losing eight ounces a day!

The impossibility of what you want to do can be illustrated easily. First, you must consider that each gram of stored body fat contains nine calories of energy, and second, one ounce is the equivalent of twenty-eight grams. One ounce of fat, therefore, possesses 252 calories, or twenty-eight times nine. In order to lose eight ounces of fat in one day, you would have to burn up 2,016 calories. That means your daily food intake must be 2,016 calories *lower* than the number required to maintain your existing body weight. A bodybuilder who weighs 200 pounds and is moderately active requires approximately 3,200 calories a day to maintain his muscle mass (roughly 1,700 calories to fuel his basal metabolic rate and another 1,500 to fuel voluntary activity). Were such an individual to reduce his caloric intake to a mere 1,200 per day, he would obviously incur a deficit of 2,000 calories a day. But when the body uses fuel for activity, it is never just in the form of fat. Only the cardiac muscle, the heart, lives off of fat for energy. The body's voluntary muscles use sugar, fat, and sometimes even muscle or protein for energy, depending on the nature of the activity and the state of the body. As Mike pointed out,

High-intensity activity, such as weight training, demands glycogen, or stored sugar. If your caloric intake is too low or you are on a low-carbohydrate diet, your body will convert protein, muscle tissue, or both to sugar for sustained high-intensity contraction. An amino acid called alanine is one of the few substances that can be converted to sugar for high-intensity contraction. Fat does not contain alanine and therefore cannot be used for fueling weight workouts. This means that you risk the possibility of using up your own muscle or ingested protein if you cut your calories back too much.



The only time Mike Mentzer recommended aerobics was when a bodybuilder's primary concern was ridding himself of excess body fat prior to a contest. Here Mike takes five after running up the famed Santa Monica Stairs. (Courtesy of Weider Health and Fitness.)

The point is that you've waited too long to begin losing weight for the contest. Five weeks is just too short a period to lose 30 pounds of fat safely. Mike's suggestion on such an issue (as he wrote a considerable amount about dieting for competition) would be as follows:

Pick a more appropriate date for your first contest by mathematically calculating how long it will take to reach the desired weight—allow yourself an extra week or two for miscalculation. If you reach a so-called peak a week before a show, the peak easily can be maintained by upping your calories a bit. On the other hand, it's ridiculous going into a contest when you're desperately trying to lose weight up until the day of the show.

Again, I'm sorry to be the bearer of bad news.

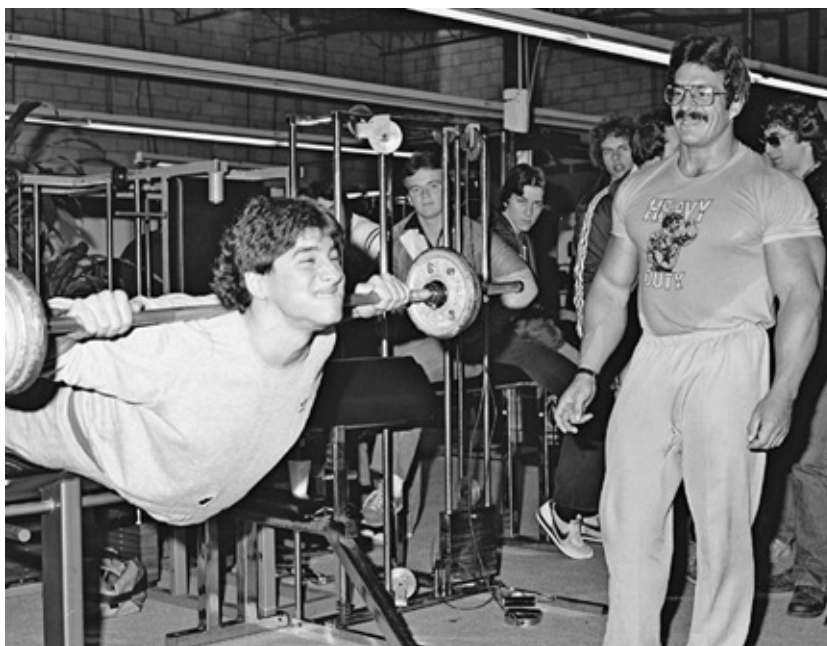
TRAINING FREQUENCY

Question: I've been training on Mike's "Ideal Routine" as outlined in your book *High-Intensity Training the Mike Mentzer Way*, following most of Mike Mentzer's Heavy Duty concepts. My progress was steady up to a point, but now I seem stale and am chronically tired. Maybe I need more work to renew my progress (I'm doing approximately two working sets per body part, and training once out of every four days), but I'm afraid to add any more sets or days of training per week as I'm already tired much of the time. What's the solution, John?

John Little: It sounds to me like you're overtraining. You're only performing two working sets per bodypart, and each set is extremely intense, which definitely will stimulate growth. But while you're most likely stimulating growth if you're training as intensely as you say you are, you're falling into the trap of thinking that the solution to your problem lies in needing to add *more* sets, thus preventing the growth, which you

stimulated, from manifesting. As indicated on [page 52](#) of the book,

The tendency among enthusiastic bodybuilders is to add more sets to their workouts, as well as to increase the number of days a week they train. This tendency must be kept in check and avoided at all costs. As a bodybuilder begins to grow larger and stronger as a result of proper training, the likelihood of overtraining looms even greater, because as the body grows stronger its ability to generate intensity increases, which, you must keep in mind, places greater stress on the body and thus calls for less training. The majority of bodybuilders do just the opposite: as they progress, they add to the amount, which will slow down their progress. This leads to desperation and more irrational thinking.



The tendency among enthusiastic bodybuilders is to add more sets to their workouts, as well as to increase the number of days a week they train. This tendency must be kept in check and avoided at all costs. (Courtesy of Chris Lund.)

It is at this point that many will add even more to their workouts, causing an even greater decrease in progress and more desperation. It is a never-ending cycle. From the time a beginner starts training, he has the potential to increase his strength some 300 percent, while his capacity to tolerate exercise or recover from the stress of exercise only improves by 50 percent. As you progress, every effort must be made to increase the intensity of your workout, which will then lead to a corresponding decrease in the amount of time you can engage in such training.

It's not enough to stimulate growth; once growth has been stimulated through high-intensity training, it must then be allowed to take place. That requires recovery, which requires time. Your chronic fatigue and less-than-optimal progress are definite signs that you're not allowing enough time to elapse between workouts. Please reread [Chapter 7](#) ('The Fourth Principle: Frequency') in *High-Intensity Training the Mike Mentzer Way* and [page 56](#) in particular, which addresses the fact that the recovery process can require upward of five days to take place—and then you have to allow still more time to elapse prior to heading back to the gym, in order for the growth phase to occur. As Mike indicates on [page 134](#), "As you gain muscle and strength, increase the time between workouts to six days, seven days, or more." Each time you increase your strength, you

make a deeper inroad into your existing level of recovery ability. This does not keep pace with your rate of size and strength gains, meaning that the stronger you get, the less frequent your exposure to the stress of training must be. Mike once wrote,

You must give yourself sufficient time between workouts for two reasons: first, your body must recover and replenish all the resources that were used up during the workout itself; and second, after full recovery has taken place, even more rest is necessary before another training session so that muscle growth can take place (assuming you've trained hard enough in the first place to stimulate growth). Remember, recovery precedes growth and both take time. If you train again before full recovery takes place, you certainly can't expect yourself to grow. If you allow enough time to elapse between workouts for recovery but not for muscle growth, you won't suffer chronic fatigue but you still won't grow! Obviously, performing more sets or more training sessions per week isn't the answer. More work is rarely the answer.

My advice would be to take a full week off from training to enable your body to fully recover from the exhaustive effects of your overtraining. When you resume training, stick to the same "Ideal Routine" (the same exercises, the same workout split, and the same two high-intensity sets per bodypart), but train once every seven days—rather than once every four. Instead of adding useless sets to your workouts, attempt to concentrate more of your energy and effort in the length of the workout you're already doing.

MORE MENTZER AND MACHINES

Question: In Mike's last book (*High-Intensity Training the Mike Mentzer Way*), I saw that Mike advocated both free weights and machines. While Nautilus was his favorite, did he ever say anything about other types of machines—such as Universal or the Isokinetic machines?

John Little: He most certainly did. Mike spoke often and eloquently about the Nautilus machines over the years, such as the following sample will attest:

While the Nautilus machines have received a lot of negative press over the years from the bodybuilding establishment, much of it was unfounded. As far as I've been able to ascertain, the Nautilus machines are the first devices to ever make a practical application of some very sound facts regarding the physiology and biomechanics of productive exercise. Nautilus machines are the first exercise machines to boast of direct variable resistance, a fundamental requirement of truly scientific exercise and a feature that other equipment manufacturers are attempting to copy. If your gym has them, however, take some time and learn their proper use.

On the subject of Universal machines, Mike offered the following observation:

The Universal machine is very popular and found in most gyms, but possesses some basic mechanical flaws that work in direct opposition to muscular functioning. Copying Nautilus, Universal has recently changed design to incorporate direct variable resistance. I do use the Universal bench press station for my shrugs as it is more comfortable than a barbell, and I don't always have access to a Nautilus shrug machine.

Of all the machines, Mike was least impressed with the Isokinetic devices, as this

statement makes abundantly clear: “The Isokinetic devices are the least productive as they don’t provide any negative resistance. They are relatively cheap, however, and self-contained.”

Mike also liked certain free-weight exercises (the following question offers further elaboration) and used them in gymnasiums where Nautilus machines were in short supply. I’ll give him the last word on the matter:

Most of our top physiques, of course, are the result of conventional barbell exercises. So if you don’t have direct access to any of the new fangled gadgets, don’t despair. My own physique is the result of a combination of barbell and Nautilus machines. For the average bodybuilder, barbells are your best practical answer with Nautilus leading the field of efficient scientific exercise devices.

MIKE’S FAVORITE EXERCISES

Question: What single exercise did Mike Mentzer consider to be the best or most productive?

John Little: The answer to that question would depend on what your definition of “best” or “most productive” is. Mike considered the Nautilus lower back machine to be the “best” lower back exercise in that it was nonsupport-ive and the resistance was applied perpendicularly to the muscle being trained (in this instance, the erector spinae muscles). He also favored the Nautilus rear delt (or row) machine and the Nautilus lateral raise, among other Nautilus machines. If you mean by “best” the one that stimulated the most growth, he would tell you either the deadlift (which works virtually every muscle in the body) or the squat. He once said the following of the squat:

The barbell squat is unquestionably the most stimulating exercise anyone could do. When growth is stimulated in any muscle, then growth is also stimulated, though to a lesser degree, in the rest of the body. This “indirect effect” seems to be proportional to the size of the muscle being stimulated. Since the legs are the biggest muscles in the body, their stimulation will have the greatest effect of stimulating growth in the rest of the body. And as squats tend to involve more of the various leg muscles during execution, it is the most productive exercise of all.

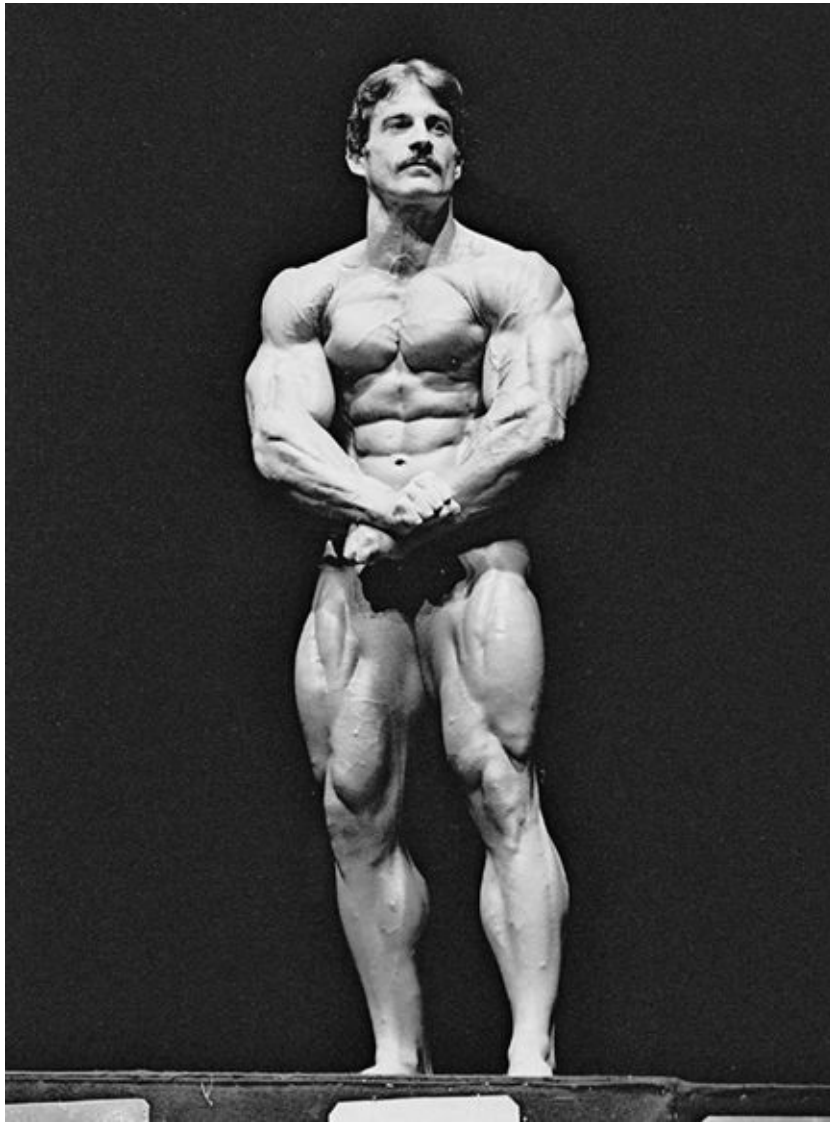
HEAVY DUTY ALL HYPE?

Question: John, I have noticed over the years that Mike’s training principles have received a lot of unfavorable and even derogatory comment (some even from people who claimed to be friends of his). One author, evidently bothered by Mike’s approach (and his success) and all the attention Mike has received over the years, said that Heavy Duty was a “fad” and a sales “gimmick.” What’s your reaction to all this?

John Little: The allegation that Heavy Duty is just a gimmick to sell courses can easily be disproved by ample evidence that Mike was using the Heavy Duty, or high-intensity, training principles he would later so eloquently espouse long before he ever wrote a single article or training course about them. The January 1976 and April 1976 issues of *Muscle Builder* magazine carried the first articles ever to appear about Mike and his approach to

high-intensity training. In the latter issue, bodybuilding author Gene Mozee conducted an in-depth interview with Mike in which he discussed (with some incredulity) Mike's training principles. He asked Mike point blank whether or not such an approach was a snow job, as Mike was then performing a mere five sets per bodypart as part of a whole-body routine he performed three times per week. At that time, all bodybuilders were training with twenty-set, marathon-style workouts, performed six and seven days a week. Mike defended his training by stating, "I can get pumped on one set. My arms are dead after five sets. Why do more? The muscle has had it." Mike went on to elaborate on high-intensity techniques, including negatives, peak contraction, training the biggest muscle groups first and finishing with the smaller ones, training to failure, and the problem with the "more is better" psychology. At this point in time, Mike's approach to training was not known as Heavy Duty or anything else.

Mike first began elaborating on these training principles publicly in the latter part of 1976 during his first seminars, which he gave at George Snyder's Olympus Spa in Warrington, Pennsylvania. By contrast, the first ever ad for Mike's Heavy Duty courses didn't appear in *Muscle Builder* until April of 1977, as a result of the public demand for more information on how Mike trained. Over the decades, Heavy Duty proved to be enormously popular, as evidenced by sales of Mike's books and courses. But such popularity, I believe, had more to do with the results the system produced for tens of thousands of aspiring bodybuilders and its logically consistent theory, along with the fact that it represented the first truly scientific approach to bodybuilding exercise. It certainly wasn't hype, as most of its major tenets can be traced to existing scientific data which can be found in most physiology textbooks. And considering Mike first spoke of these principles a long time before he had any products to sell, what exactly would he have been "hyping?"



Mike Mentzer believed that the squat was one of the best exercises one could perform in that it stimulated the entire physical system resulting in muscle growth in more than just the legs. Here Mike displays the result of balanced, overall muscular development on stage at the 1979 Mr. Olympia contest in Columbus, Ohio. (Courtesy of Chris Lund.)

What Mike did was take these then-little-known scientific facts and reinforce them by testing their application first on himself and later on thousands of personal training clients—with stunning and spectacular success. Over the years that followed the first publication of his training approach, Mike refined and still further refined these same principles, formulating what many still hold to be the final word on the subject of high-intensity training. The fact that Mike was also a gifted communicator and teacher, of course, also benefited the reader immensely, allowing him to achieve a clarity that heretofore was sorely lacking in bodybuilding writing. All of these factors contributed (and continue to contribute) to the phenomenal success of Mike's Heavy Duty training system.

Products that are based on hype typically disappear within a year. Bad word-of-mouth publicity from disgruntled consumers and bad experiences with such training methods by trainees gradually reduce the demand and thus the popularity of any product based purely on hype and marketing.

The fact that Heavy Duty has continued to grow in popularity for almost three decades now is because the principles and techniques that it advocates are actually true, not simply

hype, with the result that it has put more muscle on more bodybuilding trainees than any other bodybuilding system. As the renowned philosopher and historian Will Durant once observed, “Speak the truth and time will be your eloquence.”



Mike Mentzer used high-intensity training principles to build his phenomenal physique long before he created his Heavy Duty training courses. (Photo by John Balik, courtesy of Weider Health and Fitness.)

ONE HUNDRED UNITS OF PROGRESS

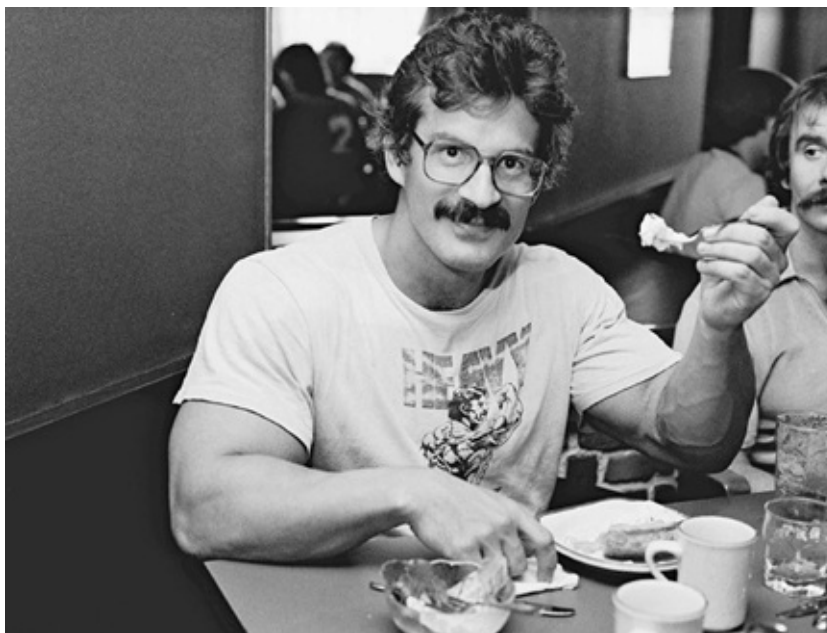
Question: In my previous approach (e.g., volume training), I made some good gains—adding some ten pounds of body weight over an eight-month period. I want to know if such gains can continue with the high-intensity, reduced-volume approach?

John Little: I recall once witnessing a young bodybuilder crowing to Mike about how he had trained in a haphazard fashion and gained a solid eight pounds of muscle over the course of a year. Mike shook his head. “You have great genetic potential, there’s no doubt about it,” he began. “However, your jubilation might be shortsighted; you are waxing enthusiastic about obtaining a mere fifty units of progress when, in fact, you were capable of one hundred units of progress. That ‘eight-pound’ gain, in other words, might well have been sixteen pounds—had you a better understanding of the actual principles involved in the science of productive bodybuilding exercise.” What the young bodybuilder lacked, in other words, was a firm grasp of the specific appropriate knowledge required to lead him in the purposeful action necessary to successfully achieve his goal of bigger and stronger muscles, such as outlined in Mike Mentzer’s approach to bodybuilding training.

DIET AND NUTRITION

Question: So much is written these days about the harmful effects of carbohydrates and sugar. Many attribute sugar intake to several diseases, especially obesity. In reading Mike Mentzer's writings on the subject, I don't find him condemning sugar or carbohydrates. As he is considered one of the premier authorities in bodybuilding, I find this odd.

John Little: While there has indeed been a lot written about carbohydrates and sugar lately, most of it is without any basis in fact. Mike looked into the issues of nutrition very thoroughly, and he had reasons—valid, scientific reasons—for not climbing on the anti-carbohydrate, anti-sugar bandwagons. Here is what Mike had to say on the subject of refined carbohydrates (sugar):

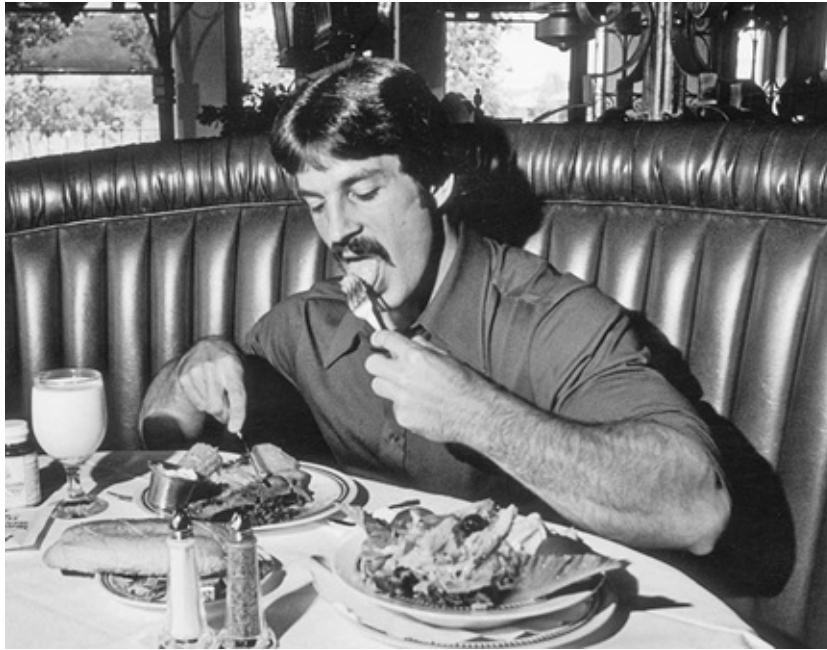


Mike Mentzer had no qualms about eating the occasional slice of pie, knowing that all hard-training bodybuilders required upward of 60 percent of their diet to be comprised of carbohydrates. (Courtesy of Chris Lund.)

When you go on a zero-carbohydrate or low-carbohydrate diet for any extended period, the body will make its own carbohydrate by converting protein and fat to sugar. If sugar is so evil and the body doesn't need it, why does the body manufacture its own when there is a deficiency in the diet? The answer obviously is that the body needs sugar to survive and remain healthy. In addition to being the most efficient source of fuel for the muscles, sugar figures centrally in a host of other physiological needs. The brain derives almost 100 percent of its nutrition from sugar. Ever notice the diminished concentration and short-term memory that attends going on a low-carb diet, not to mention the irritability? These are signals that the body sends for sugar.

So by all means include carbohydrates in your diet, but be sure to eat those that contain other essential nutrients, such as minerals and vitamins. Then an occasional candy bar or ice cream cone will do absolutely no harm. As a matter of fact, many physical educators recommend that the athlete's daily calorie consumption be comprised of up to 65 percent carbohydrates with the rest divided between fats and protein. Keep in mind that muscle tissue is made up almost entirely of water and that glucose is instrumental in keeping water in the muscle cell. Nutrition scientists are discovering that

sugar (nonrefined—stick to natural sugars such as fruit sugar) is not the villain it's been made out to be—it may actually turn out to be the bodybuilder's best friend.



A well-balanced diet ensures that a bodybuilder's nutritional needs are completely covered. (Courtesy of Weider Health and Fitness.)

Mike also pointed out that many of the so-called diseases of civilization—diabetes, hypoglycemia, gout, ulcers, cardiovascular disease, dental caries, alcoholism, and even mental illness—have all been blamed on refined carbohydrates, but as he pointed out, refined sugars are no more toxic than any other nutrient. Fat, protein, vitamins, minerals, and even water can be harmful and even fatal if consumed in large enough quantities. However, all of these substances are *needed* by the human body to make up a balanced diet. The body, therefore, has mechanisms for using them, plus mechanisms for dealing with quantities in excess of specific needs. Certain individuals, of course, have defective mechanisms; the diabetic, for instance, like all human beings, needs glucose (sugar) in his blood for various physiological purposes. The problem with the diabetic is that his system (specifically his pancreas, which excretes insulin) can't deal with excessive sugar intake as successfully as others. That is, his limits of tolerance are lower than the norm. If you do not have such a condition, then removing sugar or carbohydrates from your diet can only cause problems—both to psyche and soma.

PHILOSOPHY AND MOTIVATION

Question: I'm getting ready for a contest but am plagued by doubts. I've never competed before. While I really want to win and am generally optimistic, I can't seem to put a halt to occasional feelings of self-doubt, which I'm afraid will prevent me from competing at my best. Do you have any tips Mike used to help him cultivate the appearance of total self-confidence that he always exuded?

John Little: Indeed I do. Perhaps Mike's greatest legacy will lie in his ability to motivate people and impart certain philosophical or psychological principles that instill confidence. Mike used to say that anyone who tells you he's absolutely certain he's going to win a contest or that he never experiences any self-doubts is either deluding you or trying to

buttress a flagging sense of confidence. As Mike once indicated,



Salads should be an important staple in a bodybuilder's diet. Here Mike Mentzer looks after this aspect of a well-balanced diet in the kitchen of his Hollywood apartment in the late 1970s. (Courtesy of Weider Health and Fitness.)

It is only natural to be aware of the possibility of losing. The evidence is in the history books: there isn't a champion bodybuilder alive who hasn't lost at least one contest. And a smidgen of self-doubt just may be healthy, since it gives you that added motivation to train even harder. The important thing is to plan your contest preparation carefully and then give yourself over to it 100 percent. If you've given it all you've got, what else could you have done? Be realistic! And if you lose, view it as a learning experience and resolve to do better the next time. After the contest, review your training journal and analyze your training, dieting, aerobics, and posing for any possible mistakes. Then correct them. Despite your episodes of self-doubt, continue to cultivate a successful and positive orienting vision. Avoid contact with negative-type people before the contest. Even more important, refrain from making negative utterances of your own. Negative thoughts and comments seem to program the individual to behave in a like manner. Think positively, speak positively, and you'll act accordingly.

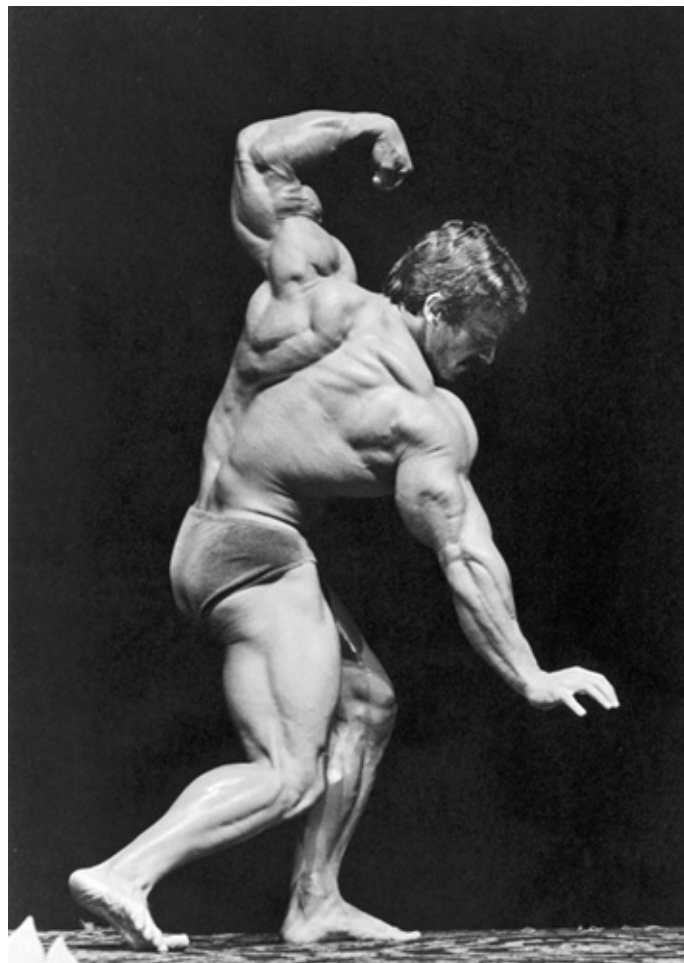
In Mike's last writing, "The Integrated Man," which has been published in his *The Revised Heavy Duty Journal* (edited by myself with Joanne Sharkey), Mike makes the following point that you would do well to remember:

As I stood there languidly, with my hands in my pockets and head cocked to one side, I entered into a reverie, transported back, back to the moment when I'd made the final decision to "officially" enter my first contest—the local championship. For days prior to my final decision, my characteristic mind-set was seriously impaired. What had been an imperturbable serenity disappeared, supplanted by a ceaseless profusion of thoughts that chafed my spirit, causing a ceaseless uneasiness. An ominous cloud lined with fear, doubt, and uncertainty now obscured my once radiant self-confidence. Day in and day out, without surcease, I was plagued by rabidly virulent questions of a nature that was uncharacteristic of my mental makeup—"Do I suffer some nameless, idiosyncratic deficiency in my overall makeup; something not shared by the others?" "Do I have what it takes to go through with this?" "Do I have the genetics required to enter and—at least—

not embarrass myself?” As this odious litany continued, it traversed the concrete, culminating in the mystically abstract: “Perhaps there exists a cosmological conspiracy whose aim is to prevent me from doing my best, from doing what is required to achieve my best-ever muscular condition.”



“Negative thoughts and comments seem to program the individual to behave in a like manner. Think positively, speak positively, and you’ll act accordingly.”—Mike Mentzer (Courtesy of Weider Health and Fitness.



“A few rational ideas will put a halt to your seemingly endless irrational negative doubts and restore peace and calm within your soul.”—Mike Mentzer (Photo by John Campos,

courtesy of Weider Health and Fitness.)

Seeking to escape this solipsistic torture chamber, I trotted out my favorite bodybuilding book, the one I always went to for inspiration. Finally, I reached one of my favorite passages; it was that point in the book where it stated: “Everyone—including the top champs—experiences fluctuations in motivation and confidence. Don’t be duped into believing that successful individuals possess some mystical endowment, and then tear your hair out wondering if you have it. Neither is the high-level motivation—and the associated self-confidence—an accident of birth randomly bestowed upon a blessed few; rather, it is, in fact, a trait that can be cultivated by anyone....” This acted to remind me that mine was a volitional consciousness, that I did indubitably possess voluntary control over my mental contents; therefore, there was no good reason to continue lacerating myself with the same unnerving, semiconscious palaver. That’s all that was required—a few rational ideas to put a halt to my seemingly endless irrational, negative doubts and restore peace and calm within my soul. There was a liberation that attended this realization, and now I was back to my old self, no longer hampered by any adventitious doubts concerning the contest. I was ready to pick up the gauntlet. With a redoubtable certitude, I consecrated that moment to my decision to enter, ready to test my mettle, wade through the challenging trenches, and embark upon the course of action I knew was necessary, let the chips fall where they may.

Your goal should be self-improvement, not dominating others. If you get yourself into your absolute best condition, you’ve already won—you’ve won the contest of self-improvement. Whether or not someone else (or a group of someone else, such as judges) thinks you’re the best body on the stage is irrelevant: Are you better than you were before? Are your muscles bigger, fuller, more defined, better proportioned than they were before? If so, then you’ve won. Getting a trophy is nice, but it’s an external reward given by external sources. If approval doesn’t come from you, of what value is it really? If others give it, others can take it back; if you give it to yourself, it remains with you irretrievably. Again, let us hear from Mike Mentzer on this point:

Even though I lost my first two Mr. Olympia contests, I entered both feeling very confident. At the same time, I recognized the fact—though I kept it in the back of my mind—that in something as subjective as a physique contest anything could happen. And what happened at the 1980 Mr. Olympia in Sydney is proof positive of that! I would’ve liked to have won each of those contests, of course, but I felt victorious in that I made notable improvements in both my physique and presentation each year.

Good luck in your upcoming contest and be the best you can be.

PERSONAL INFLUENCES

Question: I always liked Mike’s articles, as they were both well written and enjoyable. Mike’s training approach and writing style were essentially intellectual and concerned with ideas and logic, qualities one doesn’t often find these days. As you knew Mike so well, I’m curious who his intellectual influences were. Did a particular person influence him?



“Don’t be duped into believing that successful individuals possess some mystical endowment, and then tear your hair out wondering if you have it. Neither is the high-level motivation—and the associated self-confidence—an accident of birth randomly bestowed upon a blessed few. Rather, it is in fact a trait that can be cultivated by anyone.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

John Little: Many individuals had a hand in shaping Mike Mentzer’s intellect—as he would have been the first to tell you. Mike lit his torch from the candles of many people and then carried it forward, illuminating new vistas for bodybuilding and bodybuilders. Whenever I am asked a specific question such as yours, I like to, if possible, go to the source and have Mike reply to the question himself through his own words. To this end, I offer you the following from Mike:

There have been specific individuals who by example and through direct contact motivated me to develop my intellect and taught me to value reason and logic. My first major influence was Arthur Jones, the inventor of Nautilus exercise equipment.

Prior to meeting him over twenty years ago, I believed I was an expert on the subject of exercise simply because I read all of the muscle magazines and knew all of the champs’ routines. It was during our initial phone conversation that Jones divested me of that erroneous notion. I realized that not only was I not an expert, but I knew literally nothing of value about exercise. Jones made me clearly aware (for the first time in my life) that I was listening to someone who had a passion for knowledge and reason—as opposed to teachers and relatives who gave these crucial values only superficial lip service. Jones had spent an enormous amount of time and effort researching and thinking about a subject he was intensely interested in. What impressed me most was his firm grasp of facts, his

scrupulous care in defining his terms, and his unparalleled ability to communicate his ideas logically and with an almost overpowering confidence. Jones’s primary character traits—a purposefully disciplined intellect and an unwavering independence—aroused my curiosity about what had influenced him.

Five years after our meeting, I discovered the writings of novelist-philosopher Ayn Rand and found the answer. Rand, like Jones (and unlike any other philosopher or author I’ve read), exhibits an intensely passionate respect for facts, ideas, science, logic, individuality, independence, integrity, and reason. I have since become a strong advocate of her philosophy, known as Objectivism, and would advise those seeking to clarify these values in their lives to read her books.



Mike Mentzer had many intellectual influences throughout his life—from Nautilus creator Arthur Jones to the founder of Objectivism, Ayn Rand. (Courtesy of Weider Health and Fitness.)

As most of Mike’s friends and clients will attest, Ayn Rand held a very special place in Mike’s heart and her philosophy of Objectivism was the fount and prop behind his last three books (*Heavy Duty*, *Heavy Duty II: Mind and Body*, and *High-Intensity Training the Mike Mentzer Way*). I also know that the writings and audio courses of Dr. Leonard Peikoff, the foremost interpreter of Ayn Rand’s thought and her legal and intellectual heir, played a huge role in the maturation of Mike’s intellect. These same courses are available through the Ayn Rand Institute, and I know Mike would very much approve of my suggesting that you contact the good people at this institute (aynrand.org) for more information on the works of both Ayn Rand and Dr. Peikoff.

MOTIVATION (PART ONE)

Question: I train at a hard-core gym in Pennsylvania. I’m presently following Mike’s consolidated training program of two sets every seven days and am making great progress. My problem is that the “marathon” trainees (and even a few personal trainers) keep talking behind my back to other members in the gym, saying that this type of training can’t possibly work—it’s not enough exercise and I’m training “too hard”! Despite the fact I’m getting bigger and stronger each workout, the negativity of these people is starting to get to me. I know that Mike faced a similar barrage of criticism throughout his career—how did he cope with it?

John Little: First of all, you are not training “too hard.” In all my years of training and being around bodybuilders (which harkens back almost three decades now), I’ve never seen anyone train too hard, including Mike Mentzer and he trained harder than anyone I’ve ever seen. Regarding your question concerning how Mike coped with criticism, I

recall asking him that very question some years back. He replied as follows:

I don't allow others to deter me. People will continue to laugh at you and try to deflect you from your goal. Why? Because they don't have sharply delineated goals themselves. Being in the presence of a strong person who is highly motivated underscores their own sense of weakness and inadequacy. That, however, is their problem. Don't concern yourself with these negative types. The world is teeming with people whose lives lack purpose and meaning.

For advice on how to cultivate and strengthen your resolve, read on.

MOTIVATION (PART TWO)

Question: John, it seems to me that Heavy Duty high-intensity training, as demanding as it is, requires more motivation to engage in successfully than do routines that stress duration exclusively. Don't you think relatively few people are motivated enough to continue a Heavy Duty program very long? I've seen many guys from my gym start Mike's training program only to quit after a few weeks. I must say, however, that the few who remained with it, myself included, love it and could never revert to our old training habits—that is, high sets and long duration. My training partners were wondering if you had any suggestions for increasing our motivation? In closing, we would like to thank you for your elucidation and continuation of a rational approach to training. Now we apply it to every aspect of our lives.

John Little: Thanks for the kind words, which I know Mike would appreciate very much. He would smile to know that his courses and articles had such a positive effect on your mind as well as your body. Motivation was a subject that Mike was an absolute master of. I recently spoke to Joanne Sharkey about this very issue. We both remembered calling Mike, at various points throughout the tenure of our friendship, when feeling down or out of sorts. Mike would instantly and positively steer the conversation to the potential of the human mind and what we can accomplish if we think rationally about whatever it is that burdens our psyches. That points out a problem most bodybuilders suffer from—we spend so much time tending to our bodies (which is great) that we often forget the cultivation of our minds (which is bad). Mike used to speak to this issue constantly, so it might serve us well at this point to revisit some of his own thoughts on this very important topic:

When I mention the training and improvement of our minds, I'm not speaking in abstractions. No, I am talking about something rooted in everyday reality. The mind is actually very much like a muscle in that only through persistent training can its capacity be stretched. Before anyone can hope to develop his or her body to its full potential, the athlete must cultivate the mind. OK, I know. The question inevitably arises. How can I cultivate my mind? The answer is quite simple and applies to everyone regardless of their education, their IQ, or their experience. What you must do is learn that your mind can be made into a precision instrument. It will become such an instrument only when you do the following:



“The mind is actually very much like a muscle in that only through persistent training can its capacity be stretched.”—Mike Mentzer (Courtesy of Weider Health and Fitness.)

- 1. Know exactly what you want. That will remain vague until you take the time to discover your priorities in life. These priorities can be uncovered only through introspection. You must learn to listen to your “inner voices/”*
- 2. Find out exactly what is required to get what you want.*
- 3. Take an active role in getting what you want.*

Discovering exactly what you want is the hard part, since a rigorous and structured self-examination is required—a kind of spiritual search. If you currently suffer from anxiety, uncertainty, and inner turmoil, it’s because you have become separated from your true self; that is, you are suffering from a spiritual crisis that must be resolved. If it seems overwhelming at times, seek professional help. Spiritual crises are a natural part of life and can benefit you if you confront them.

To learn what you need to get what you want out of life requires initiative. It will necessitate continuous research and study. Make a daily effort to sit down and review your bodybuilding goals, focusing on their place in your hierarchy of values. If becoming a great bodybuilder is something you believe will really fulfill you, focusing on your goals will serve to generate increased enthusiasm.

If you take time for this daily review, you’ll notice your workouts improving. Why? Because intensity is exactly what I’ve been talking about. Intensity is a state of mind where you’ve focused all your energy on the task at hand. Did you ever hear someone’s personality being described as “intense”? An intense individual is precisely someone who knows exactly what it is he or she wants, knows how to get it, and goes about getting it with enthusiasm.

Intensity is bringing all your physical and psychological energy to bear on a task. You must take full responsibility. Only by developing the intense temperament described can you achieve bodybuilding greatness.

For those seeking more fuel for their motivation, I recommend you read Chapters 19 to 22 in Mike’s last book, *High-Intensity Training the Mike Mentzer Way*.



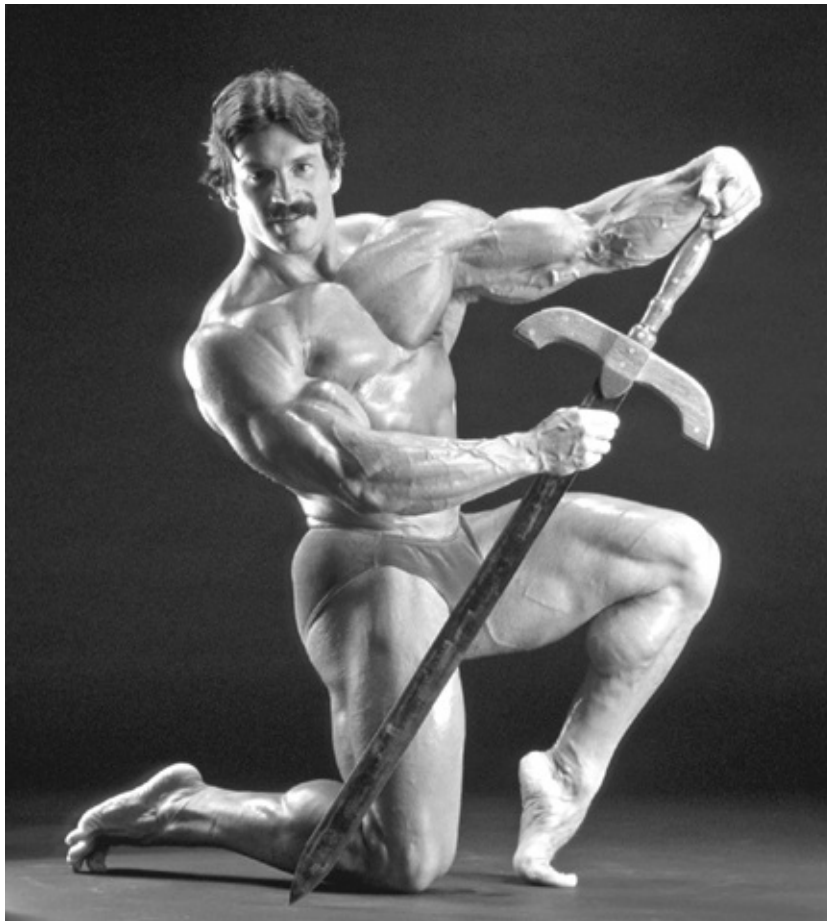
“Discovering exactly what you want is the hard part, since a rigorous and structured self-examination is required—a kind of spiritual search.”—Mike Mentzer (Photo by Mike Neveux, courtesy of Weider Health and Fitness.)

THE CHARACTER OF MIKE MENTZER

Question: I had read recently on an Internet forum that Mike went through a lot of problems in his life. These people seemed to revel in the fact that Mike was human and not invulnerable to pain and suffering. They make it seem like an issue of character. Yet, from everything I can gather—including the reams of testimonials on his official website, mike.mentzer.com—Mike seemed to be a really decent human being who was very approachable and helpful to anyone, particularly those who were having problems. As you knew Mike so well, what are your experiences on this issue of character?

John Little: I don’t think I’ve ever met anybody who took the issue of character as seriously as Mike Mentzer. More than merely reading and talking about it, he lived it when it counted. While it’s true that Mike did experience more than his fair share of grief and financial and emotional hardships, he always was able to come back stronger and with new treasures to share with the bodybuilding world. It was, in fact, after he had experienced his hardest times emotionally (in the late 1980s) that he came back with the revised (and now classic) *Heavy Duty*, *Heavy Duty II: Mind and Body*, *Muscles in Minutes*, and finally, his last book, *High-Intensity Training the Mike Mentzer Way*, in which he further refined and perfected the science of bodybuilding exercise. But on your point about Mike’s approachableness and helpfulness, I know of many instances throughout Mike’s life where he helped others who were in trouble—in two instances he may even have saved the lives of individuals.

One instance was when he helped Samir Bannout at the infamous 1980 Mr. Olympia contest in Sydney, which I related in [Chapter 2](#). The other occurred when Mike was working out in Gold's Gym in Venice, California. During Mike's workout, a bodybuilder across from where Mike was doing a set of Nautilus leg extensions was performing a set of upside-down leg presses. After the set, he staggered over to a bench and lay down, complaining that his head hurt. Mike, who had witnessed the man's behavior, rushed over and like a doctor (he had studied medicine briefly in college, prior to becoming a professional bodybuilder), began to ask the man questions about his condition. When Mike asked him if he had blurred vision, the man replied in the affirmative. At hearing this, Mike immediately checked the man's pulse, which he found to be beating rapidly, but faintly. When the man tried to stand up, he was dizzy. Apart from his medical studies at the University of Maryland, Mike also had worked for years in a neurology clinic and in emergency rooms. This experience caused Mike to suspect that the bodybuilder had "stroked out." Mike immediately arranged to have the man taken to a hospital emergency room.



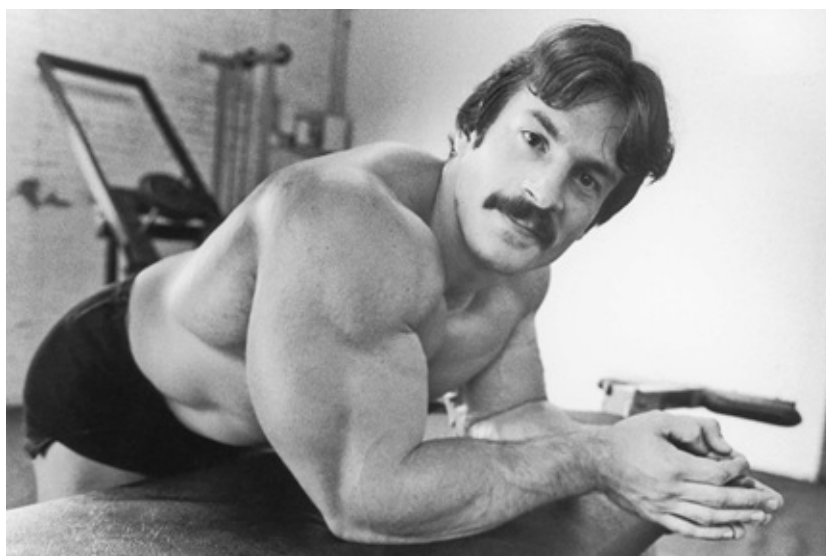
There were many instances throughout his life when Mike Mentzer was a hero; in two of these instances, he may even have saved the lives of individuals. (Photo by John Balik, courtesy of Weider Health and Fitness.)

As it turned out, the man had suffered not one but two different strokes during that set of leg presses! Had it not been for Mike's awareness and assistance, the man might have attempted another set of leg presses, which could have proven fatal. Mike worried about this happening to other bodybuilders and because of his concern for their welfare, he went on to write a short piece on the dangers of holding one's breath while performing such exercises. He stated the following caveat to help other bodybuilders avoid such a

potentially life-threatening mistake:

Leg presses, especially the kind performed on machines that require you to lie on your back, can be extremely dangerous for a number of reasons. First of all, lying on your back with your legs elevated will increase intracranial blood flow and pressure. The heavy exertion of the legs pressing against a heavy weight further increases your blood pressure. It has also been demonstrated that holding onto hand placements tightly while doing leg work can raise blood pressure up to 30 percent above normal. Now to make matters worse, people tend to hold their breath during heavy exertion. This can result in the Valsalva effect, which increases intrathoracic pressure and blocks the flow of blood to the brain, making you light-headed. As you can see, with all these factors considered together, there is a strong possibility of something bad happening inside the head if the pressure gets high enough. At worst, the person will suffer a cerebrovascular accident, more commonly known as a stroke.

For this reason, Mike typically advocated the use of a leg press machine that required you to sit upright, rather than on your back, and he always monitored his personal training clients extremely closely. That was the kind of man Mike Mentzer was, and whenever I hear of someone attempting to run him down (as they typically do when a person is no longer around to defend himself), these are the memories of Mike that come to mind to counter the comments by those who either never knew the man, or who turned their backs on him during his time of need and are looking to rationalize the shallowness of their own humanity.



Apart from his medical studies at the University of Maryland, Mike Mentzer also worked for years in a neurology clinic and in emergency rooms. His knowledge of both psyche and soma was very thorough, indeed. (Courtesy of Weider Health and Fitness.)

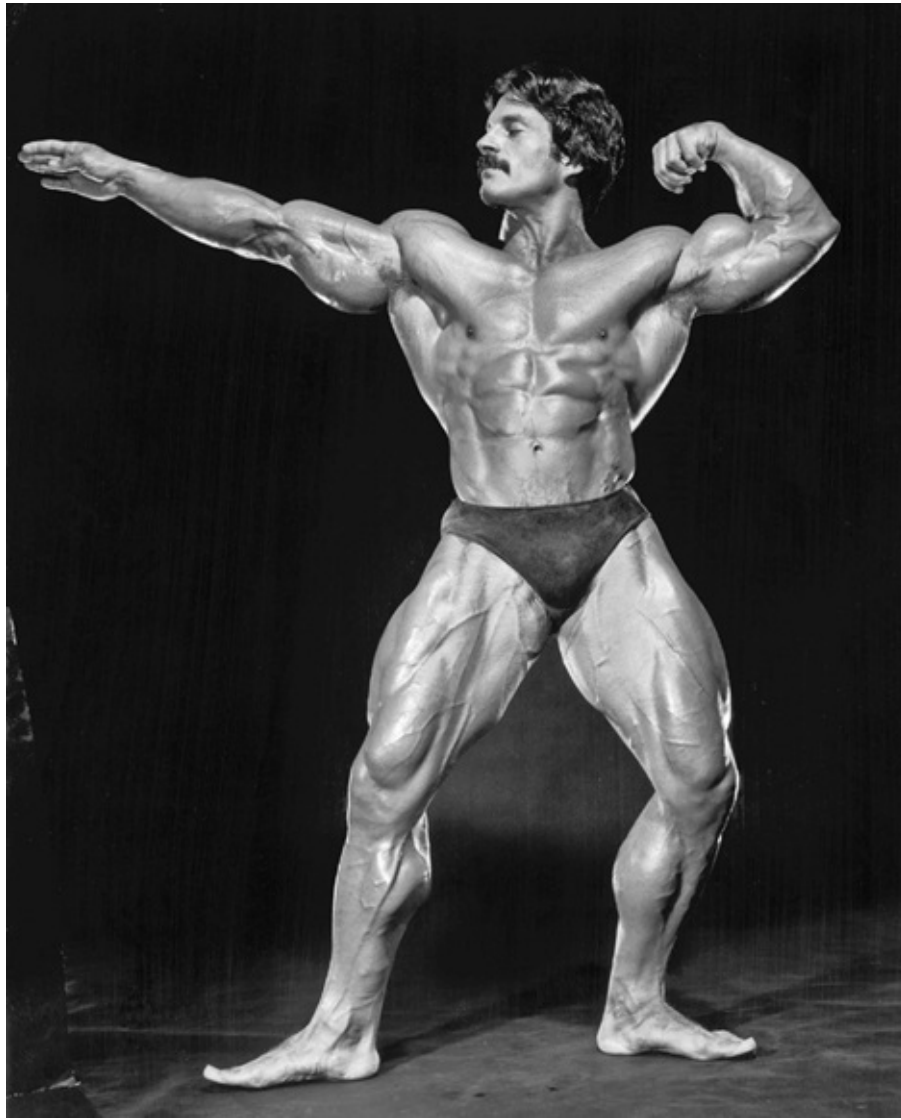
THE MEANS BY WHICH KNOWLEDGE IS OBTAINED

Question: One of the bodybuilders in the gym where I train says that we have to “listen to our bodies” and train certain bodyparts according to how we feel on a given day. I’ve searched Mike’s writings, but I can’t say that he seems to have much faith in the “instinctive training principle.”

John Little: As Mike was a very devout student of the philosophy of Objectivism, created by Ayn Rand, he was a man of reason and not faith of any kind. As a result, he held that human beings are not instinctual creatures whose knowledge is hardwired into their nervous systems at birth. In other words, there is no such thing as an “instinctive training principle” that people can unerringly rely on to guide them in their training efforts, as many seem to believe. Rather than being instinctual creatures, we as a species have to gain our knowledge through a voluntary mental effort; that is, we have to *choose* to think to gain knowledge. Because most people have never taken the time to learn how to think and judge critically, they often make wrong choices and never thoroughly cultivate the ability to distinguish truth from falsehood. Mike believed this phenomenon extended far beyond the realm of bodybuilding; he believed the entire world was “literally awash in a sea of false ideas.” He did not hold, however, that valid knowledge didn’t exist. To the contrary, Mike held that it most certainly does—and more important, it is available to any human mind willing to exercise its power of serious thought and inquiry.



Mike Mentzer held that like mission control at NASA you should view each one of your workouts as a sort of a mission, and just as NASA does with theirs, you should fully expect to succeed with each one. (Photo by John Balik, courtesy of Weider Health and Fitness.)



Mike Mentzer—the embodiment of the art, science, and philosophy of bodybuilding.
(Courtesy of Weider Health and Fitness.)

Mike’s favorite analogy in this respect involved NASA, the National Aeronautics and Space Administration. He would ask his students, “Why has NASA been so spectacularly successful in sending men to the moon and in bringing them back safely each time?” When it became clear that no answer was forthcoming, he would typically answer the question for them:

NASA has been so spectacularly successful, not because they just “kinda, sorta” know what they’re doing; they have been so successful because they have a firm intellectual grasp and understanding of the one and only possible valid theory of space travel. They have the specific appropriate knowledge necessary, and, as a result, they’ve succeeded with each one of their man-moon missions. Taking a cue from NASA, you should view each one of your workouts as a sort of a ‘mission,’ and that, like NASA with theirs, you should fully expect to ‘succeed’ with each one.

Mike would then ask his students to envision a scenario whereby such “specific appropriate knowledge” was absent:

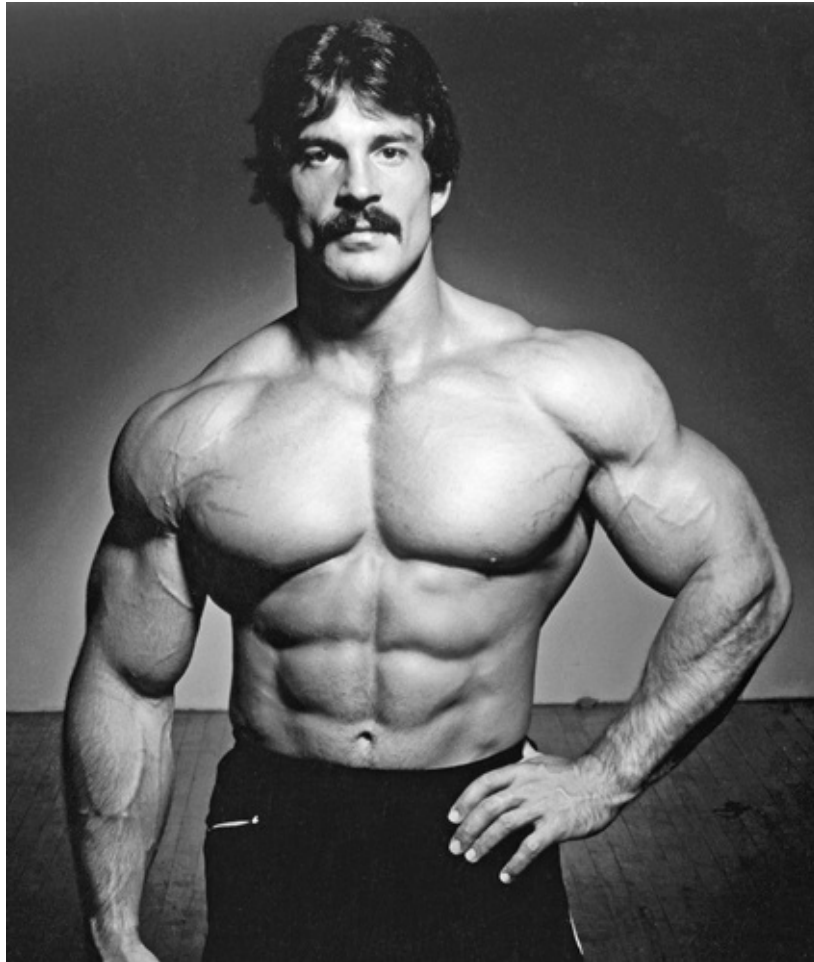
Imagine that we’re in Houston at headquarters control, NASA, right before a man-moon launch. We look over and see that the director is sitting there wringing his hands and crying out, “Oh, gee, I hope we make it this time!” Could you imagine such a thing? Of

course not. Why? Because the people at NASA are supremely confident. They have little doubt that they're going to succeed because they have the "specific appropriate knowledge" relevant to success in their task.

The scientists at NASA have a "rational" approach based on an understanding of logic, science, and all the things that help make Western civilization possible. I emphasize this because many bodybuilders find it impossible to believe, or difficult to believe, that they're going to succeed with each one of their workouts. So I take the time to point out, "Now look, if NASA can succeed with each one of their man-moon missions—let's face it, an enormously complex goal requiring abstract theoretical knowledge from physics, electronics, astronomy, engineering, mathematics—you mean to tell me we can't succeed with each one of our missions at the gym here on Earth?" And presented in that kind of a scientific context they see my point.

REFERENCES

A MIKE MENTZER READING LIST



This reading list is a suggested sequence of books and essays for those who want to read further in Mike Mentzer's ideas but aren't sure where to start or how to proceed. This is by no means a comprehensive or definitive list of the Mike Mentzer literature, as more volumes of Mentzer's writings are released each year in the Mike Mentzer Library Series.

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Mike Mentzer's Heavy Duty Seminar (Mentzer-Sharkey Enterprises, Inc., 2005).

All of the preceding publications are available at the Mike Mentzer official website mike.mentzer.com, so please visit the website for a current listing.

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Joanne Sharkey is the legal successor-in-interest to Mike Mentzer's intellectual property rights, name, and image, including all copyrights and trademarks. She is CEO of Mentzer-Sharkey Enterprises, Inc., and at the helm of the Mentzer legacy, whereby she continues to operate Mentzer's official website, mike.mentzer.com for the benefit of Mentzer fans. Sharkey was also Mentzer's closest friend and business manager during the final years of his life. Sharkey worked closely alongside Mentzer during the final evolution of Mentzer's Heavy Duty training theory. Joanne Sharkey has released personal Mentzer audio recordings, notes, and essays from the Mike Mentzer archives for this project and agreed to oversee the manuscript.